GREE
Change for Life

Service Manual

Models: GPC12AJ-K3NNA1A
GPH12AJ-K3NNA1A
GPC12AJ-K3NNA1A(Cold Plasma)
GPH12AJ-K3NNA1A(Cold Plasma)
GPH12AJ-K3NNA1A(Dark Brown)
(Refrigerant R410)

GREE ELECTRIC APPLIANCES, INC.OF ZHUHAI

Tabe of Contents

Summary and Features 1

1. Safety Precautions 2

2. Specifications 3

3. Construction Views 5

4. Refrigerant System Diagram 6

5. Schematic Diagram 7

- 5.1 Electrical Data 7
- 5.2 Electrical Wiring 7
- 5.3 Printed Circuit Board 10

6. Function and Control 11

- 6.1 Operating Methods 11
- 6.2 Names and Functions Remote Controller 12
- 6.3 Description of Each Control Operation Function and Control 15

7. Installation Instructions 17

8. Exploded Views and Parts List 19

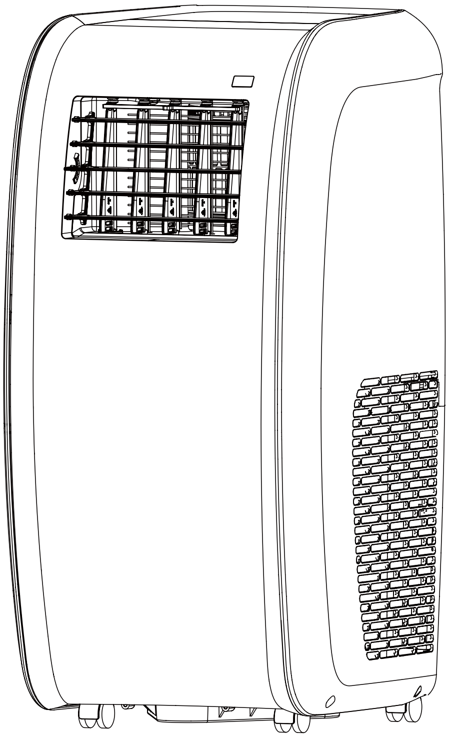
9. Troubleshooting 25

- 9.1 Confirm below 2 points before any failures occurred 25
- 9.2 Error Code 25
- 9.3 Failure Repair 27
- 9.4 Failure Phenomenon and Solution 31

10. Removal Procedure 33

Summary and Features

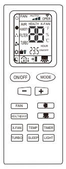
Models:



GPC12AJ-K3NNA1A
GPH12AJ-K3NNA1A
GPC12AJ-K3NNA1A(Cold Plasma)
GPH12AJ-K3NNA1A(Cold Plasma)
GPH12AJ-K3NNA1A(Dark Brown)

Remote Controller

YB1F2



1. Safety Precautions

Installing, starting up, and servicing air conditioner can be hazardous due to system pressure, electrical components, and equipment location, etc.

Only trained, qualified installers and service personnel are allowed to install, start-up, and service this equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils. All other operations should be performed by trained service personnel.

When handling the equipment, observe precautions in the manual and on tags, stickers, and labels attached to the equipment. Follow all safety codes. Wear safety glasses and work gloves. Keep quenching cloth and fire extinguisher nearby when brazing.

Read the instructions thoroughly and follow all warnings or cautions in literature and attached to the unit. Consult local building codes and current editions of national as well as local electrical codes.

Recognize the following safety information:

⚠ Warning	Incorrect handling could result in personal injury or death.
⚠ Caution	Incorrect handling may result in minor injury, or damage to product or property.

⚠ Warning

All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.

- Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.
- Never supply power to the unit unless all wiring and tubing are completed, reconnected and checked.
- This system adopts highly dangerous electrical voltage. Incorrect connection or inadequate grounding can cause personal injury or death. Stick to the wiring diagram and all the instructions when wiring.
- Have the unit adequately grounded in accordance with local electrical codes.
- Have all wiring connected tightly. Loose connection may lead to overheating and a possible fire hazard.

All installation or repair work shall be performed by your dealer or a specialized subcontractor as there is the risk of fire, electric shock, explosion or injury.

- Follow all the installation instructions to minimize the risk of damage from earthquakes, typhoons or strong winds.
- Avoid contact between refrigerant and fire as it generates poisonous gas.
- Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture and other hazards.
- Make sure no refrigerant gas is leaking out when installation is completed.
- Should there be refrigerant leakage, the density of refrigerant in the air shall in no way exceed its limited value , or it may lead to explosion .
- Keep your fingers and clothing away from any moving parts.
- Clear the site after installation. Make sure no foreign objects are left in the unit.
- Always ensure effective grounding for the unit.

⚠ Caution

- Never install the unit in a place where a combustible gas might leak, or it may lead to fire or explosion.
- Make a proper provision against noise when the unit is installed at a telecommunication center or hospital.
- Provide an electric leak breaker when it is installed in a watery place.
- Never wash the unit with water.
- Handle unit transportation with care. The unit should not be carried by only one person if it is more than 20kg.
- Never touch the heat exchanger fins with bare hands.
- Never touch the compressor or refrigerant piping without wearing glove.
- Do not have the unit operate without air filter.
- Should any emergency occur, stop the unit and disconnect the power immediately.

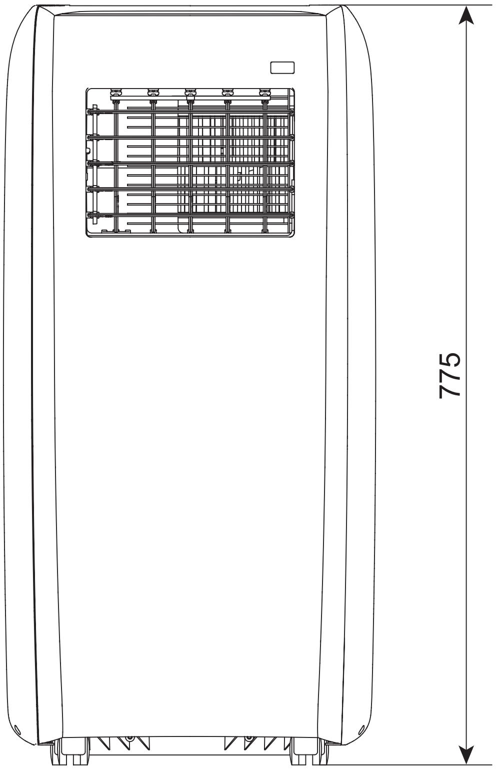
2. Specifications

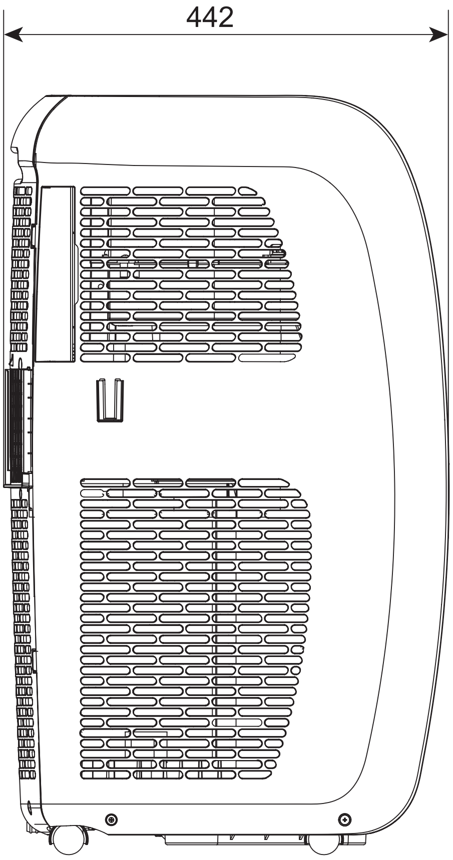
Model			GPC12AJ-K3NNA1A GPC12AJ-K3NNA1A(Cold Plasma)	GPH12AJ-K3NNA1A GPH12AJ-K3NNA1A(Cold Plasma) GPH12AJ-K3NNA1A(Dark Brown)
Product Code			CK010017900 CK010017901	CK010018000 CK010018001 CK010018003
Power Supply	Rated Voltage	V ～	220-240	220-240
	Rated Frequency	Hz	50	50
	Phases		1	1
Cooling Capacity		W	3520	3520
Heating Capacity		W	/	3520
Cooling Power Input		W	1350	1350
Heating Power Input		W	/	1170
Cooling Power Current		A	6	6
Heating Power Current		A	/	5.2
Max operation Input		W	1550	1550
Max operation Current		A	6.9	6.9
Air Flow Volume(H/M/L)		m^3/h	420/380/320	420/380/320
Dehumidifying Volume		L/h	1	1
EER		W/W	2.61	2.61
COP		W/W	/	3.01
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	16-24	16-24
Climate Type			T1	T1
Isolation			I	I
Moisture Protection			IP20	IP20
Permissible Excessive Operating Pressure for the Discharge Side		MPa	4.3	4.3
Permissible Excessive Operating Pressure for the Suction Side		MPa	2.5	2.5
Throttling Method			Capillary	Capillary
Defrosting Method			/	Automatic Defrosting
Fuse		A	3.15	3.15
Operation Temp		°C	16~30	16~30
Ambient Temp (Cooling)		°C	16~35	16~35
Ambient Temp (Heating)		°C	/	10~27
Sound Pressure Level (H/M/L)		dB (A)	55/53/51	55/53/51
Sound Power Level (H/M/L)		dB (A)	65/63/61	65/63/61
Dimension (WXHXD)		mm	375X775X442	375X775X442
Dimension of Carton Box (LXWXH)		mm	552X434X860	552X434X860
Dimension of Package (LXWXH)		mm	555X437X875	555X437X875
Net Weight		kg	40	40
Gross Weight		kg	45	45
Refrigerant			R410A	R410A
Refrigerant Charge		kg	0.88	0.88

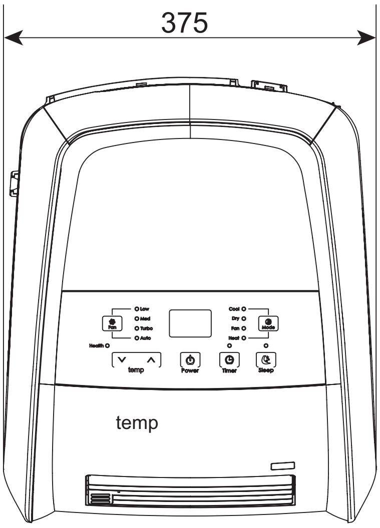
Compressor	Compressor Manufacturer/Trademark		ZHUHAI LANDA COMPRESSOR CO., LTD	ZHUHAI LANDA COMPRESSOR CO., LTD
	Compressor Model		QXA-C133B030gA	QXA-C133B030gA
	Compressor Oil		RB68EP or FVC 68D	RB68EP or FVC 68D
	Compressor Type		Rotary	Rotary
	L.R.A.	A	25	25
	Compressor RLA	A	5.3	5.3
	Compressor Power Input	W	1130	1130
	Overload Protector		HPA-525/UP3-22	HPA-525/UP3-22
Evaporator	Fan Type		Centrifugal	Centrifugal
	Diameter Length(DXL)	mm	Φ187.6X108.2	Φ187.6X108.2
	Fan Motor Speed(H/M/L)	r/min	1080/980/900	1080/980/900
	Output of Fan Motor	W	85	85
	Fan Motor RLA	A	0.797	0.797
	Fan Motor Capacitor	μF	5	5
	Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7	Φ7
	Row-fin Gap	mm	3-1.4	3-1.4
	Coil Length (LXDXW)	mm	471X38.1X228.6	471X38.1X228.6
	Swing Motor Model		/	/
	Output of Swing Motor	W	/	/
Condenser	Fan Type		Centrifugal	Centrifugal
	Fan Diameter	mm	Φ227.7	Φ227.7
	Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Pipe Diameter	mm	Φ7	Φ7
	Rows-fin Gap	mm	1-1.4/2-1.4	1-1.4/2-1.4
	Coil Length (LXDXW)	mm	475X12.7X266.7 + 585X25.4X304.8	475X12.7X266.7 + 585X25.4X304.8
	Fan Motor Speed(H/M/L)	rpm	1080/980/900	1080/980/900
	Output of Fan Motor	W	85	85
	Fan Motor RLA	A	0.797	0.797
	Fan Motor Capacitor	μF	5	5

The above data is subject to change without notice. Please refer to the nameplate of the unit.

3. Construction Views



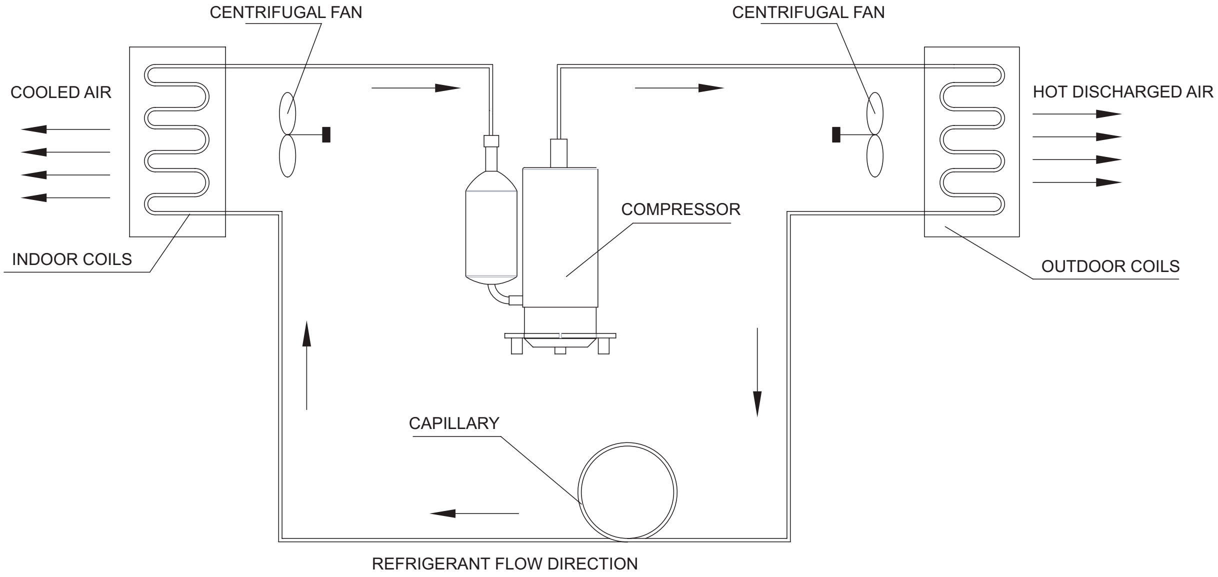



375
Low
Med
Turbo
Auto
Fan
Cool
Dry
Fan
Heat
Mode
Health
temp
Power
Timer
Sleep
temp

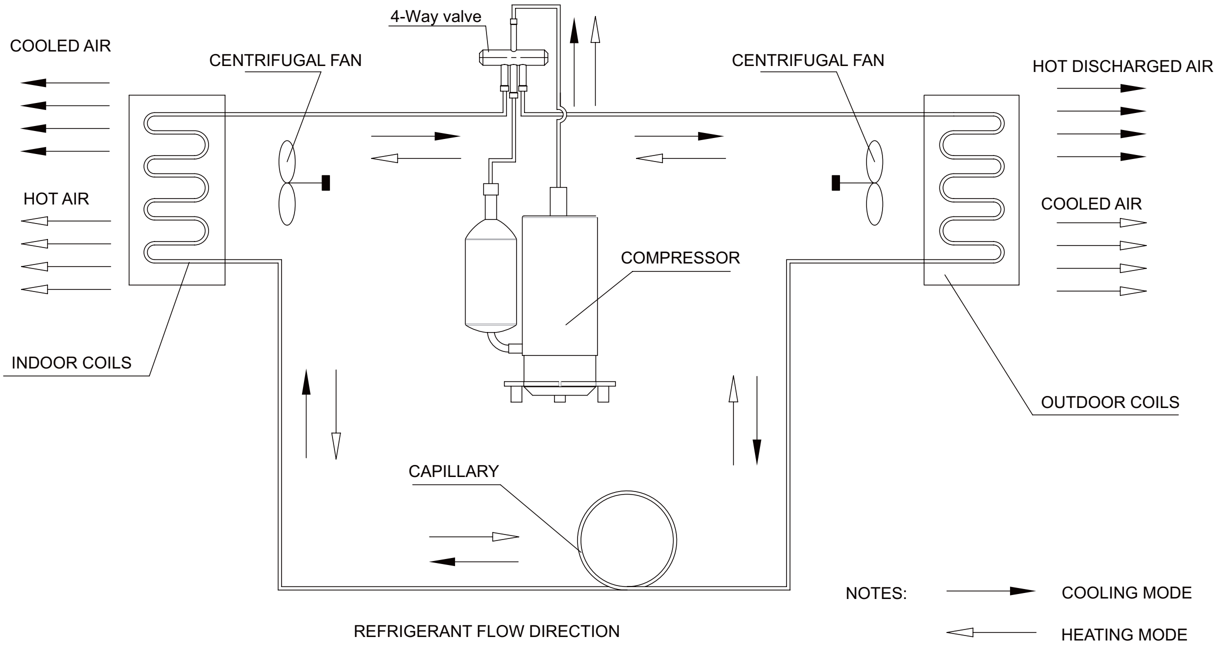
Unit:mm

4. Refrigerant System Diagram

Cooling Only Model


CENTRIFUGAL FAN
CENTRIFUGAL FAN
COOLED AIR
HOT DISCHARGED AIR
COMPRESSOR
INDOOR COILS
OUTDOOR COILS
CAPILLARY
REFRIGERANT FLOW DIRECTION

Cooling & Heating Models


4-Way valve
COOLED AIR
CENTRIFUGAL FAN
CENTRIFUGAL FAN
HOT DISCHARGED AIR
HOT AIR
COOLED AIR
COMPRESSOR
INDOOR COILS
OUTDOOR COILS
CAPILLARY
REFRIGERANT FLOW DIRECTION
NOTES:
COOLING MODE
HEATING MODE

5. Schematic Diagram

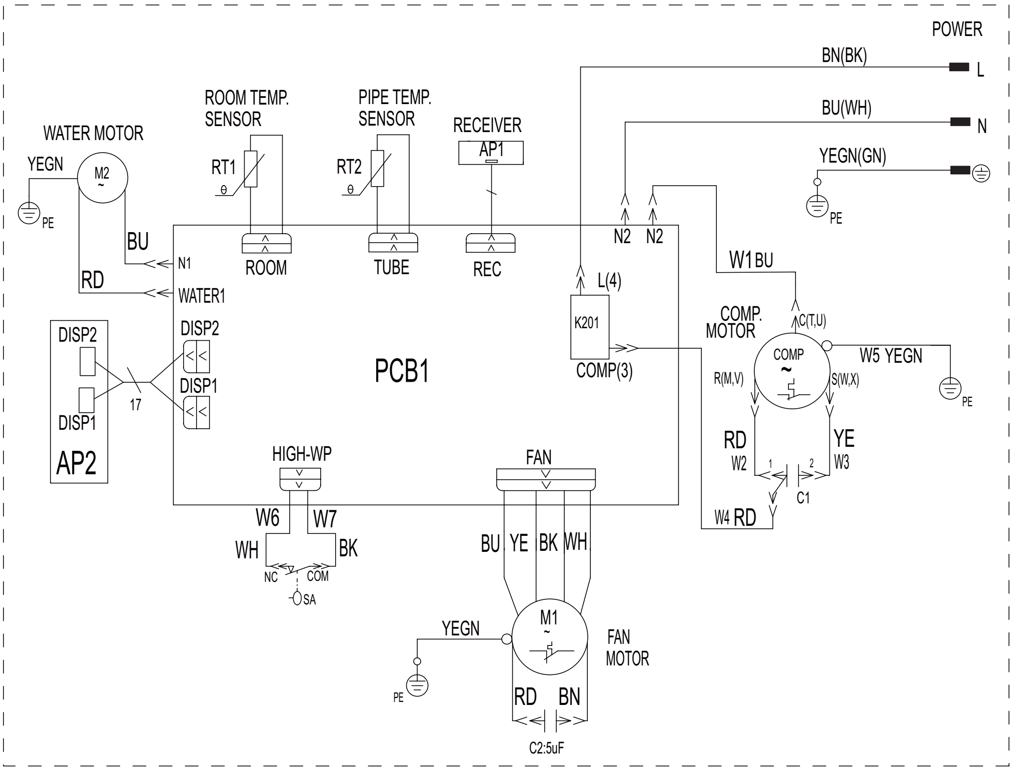
5.1 Electrical Data

meaning of marks

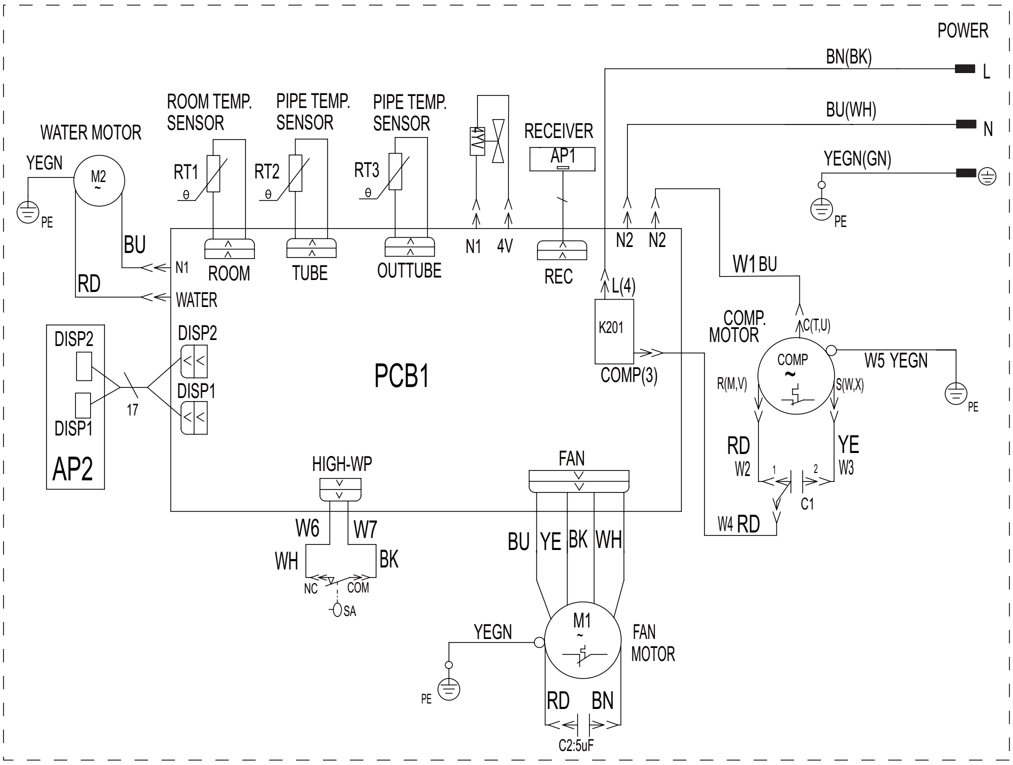
Symbol	Color symbol	Symbol	Color symbol
BU	BLUE	BN	BROWN
BK	BLACK	Symbol	Part name
YE	YELLOW	COMP	COMPRESSOR
RD	RED	⏚	PROTECTIVE EARTH
YEGN	YELLOW GREEN		

5.2 Electrical Wiring

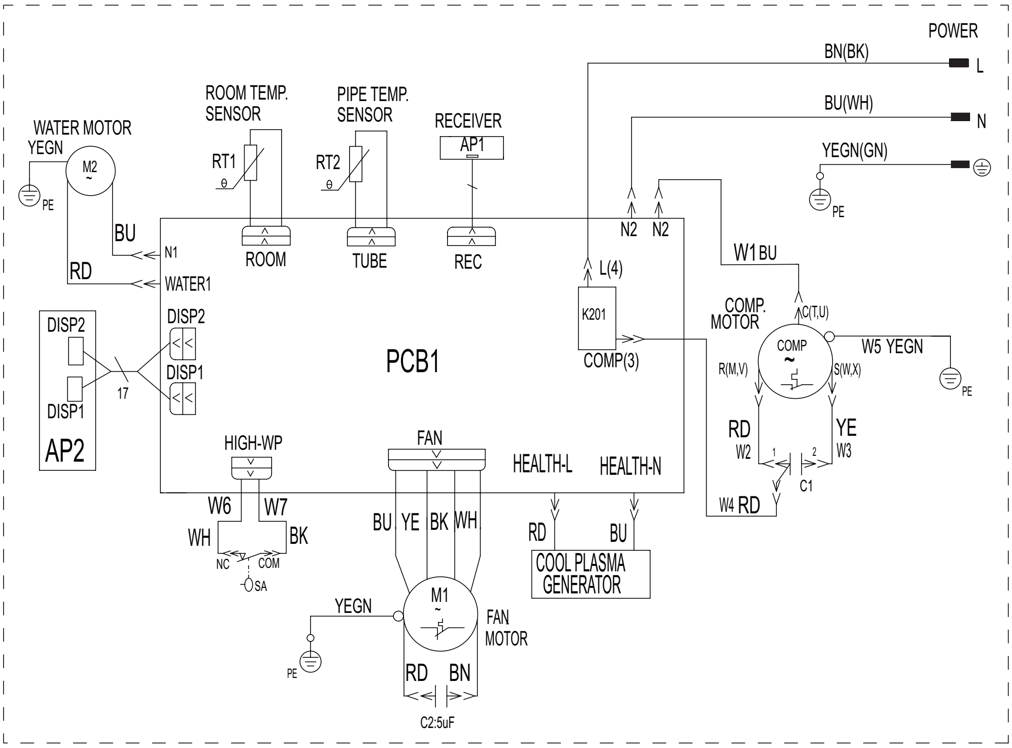
GPC12AJ-K3NNA1A


POWER
BN(BK)
L
BU(WH)
N
YEGN(GN)
PE
ROOM TEMP. SENSOR
PIPE TEMP. SENSOR
RECEIVER
AP1
WATER MOTOR
YEGN
M2
PE
RT1
RT2
BU
RD
N1
WATER1
ROOM
TUBE
REC
N2
N2
W1 BU
L(4)
K201
COMP(3)
COMP. MOTOR
C(T,U)
COMP
R(M,V)
S(W,X)
W5 YEGN
PE
RD
W2
YE
W3
C1
W4 RD
DISP2
DISP1
AP2
17
DISP2
DISP1
PCB1
HIGH-WP
FAN
W6
W7
WH
BK
NC
COM
SA
BU
YE
BK
WH
M1
YEGN
PE
FAN MOTOR
RD
BN
C2:5uF

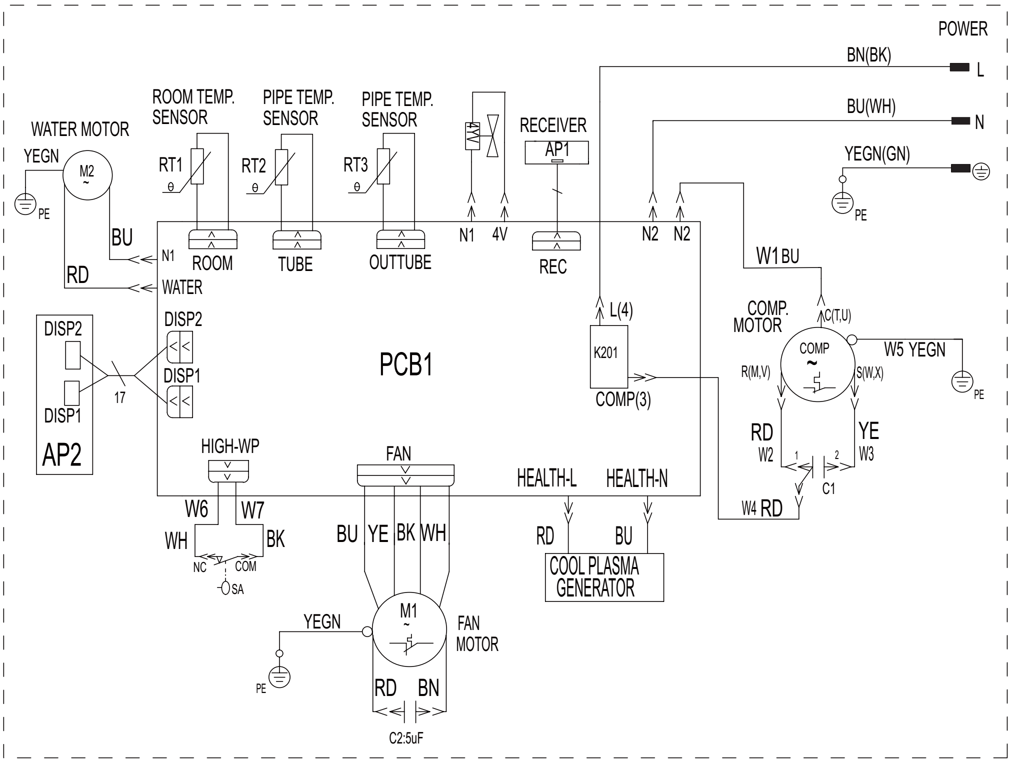
GPH12AJ-K3NNA1A   GPH12AJ-K3NNA1A(Dark Brown)


POWER
BN(BK)
L
BU(WH)
N
YEGN(GN)
PE
WATER MOTOR
YEGN
M2
PE
ROOM TEMP. SENSOR
PIPE TEMP. SENSOR
PIPE TEMP. SENSOR
RT1
RT2
RT3
RECEIVER
AP1
N1
4V
N2
N2
BU
N1
ROOM
TUBE
OUTTUBE
REC
RD
WATER
L(4)
W1 BU
DISP2
DISP2
K201
COMP. MOTOR
C(T,U)
COMP
W5 YEGN
PCB1
COMP(3)
R(M,V)
S(W,X)
PE
17
DISP1
DISP1
AP2
RD
W2
YE
W3
C1
HIGH-WP
FAN
W4 RD
W6
W7
WH
BK
NC
COM
SA
BU
YE
BK
WH
YEGN
M1
FAN MOTOR
PE
RD
BN
C2:5uF

GPC12AJ-K3NNA1A(Cold Plasma)


POWER
BN(BK)
L
BU(WH)
N
YEGN(GN)
PE
WATER MOTOR
YEGN
M2
PE
ROOM TEMP. SENSOR
PIPE TEMP. SENSOR
RECEIVER
AP1
RT1
RT2
N2
N2
BU
N1
ROOM
TUBE
REC
W1 BU
RD
WATER1
L(4)
DISP2
DISP2
K201
COMP. MOTOR
C(T,U)
COMP
W5 YEGN
PCB1
COMP(3)
R(M,V)
S(W,X)
PE
17
DISP1
DISP1
AP2
RD
W2
YE
W3
C1
HIGH-WP
FAN
HEALTH-L
HEALTH-N
W4 RD
W6
W7
WH
BK
NC
COM
SA
BU
YE
BK
WH
RD
BU
COOL PLASMA GENERATOR
YEGN
M1
FAN MOTOR
PE
RD
BN
C2:5uF

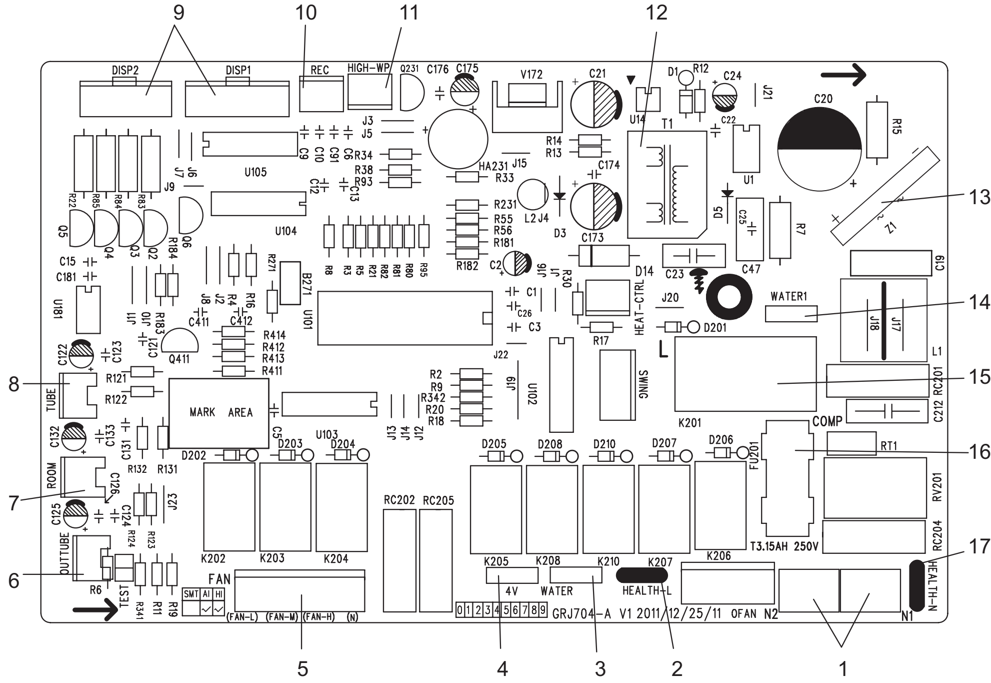
GPH12AJ-K3NNA1A(Cold Plasma)


POWER
BN(BK)
L
BU(WH)
N
YEGN(GN)
PE
WATER MOTOR
YEGN
M2
PE
ROOM TEMP. SENSOR
RT1
PIPE TEMP. SENSOR
RT2
PIPE TEMP. SENSOR
RT3
4V
RECEIVER
AP1
BU
RD
N1
WATER
ROOM
TUBE
OUTTUBE
N1
4V
REC
N2
N2
W1 BU
L(4)
COMP. MOTOR
C(T,U)
COMP
W5 YEGN
PE
R(M,V)
S(W,X)
DISP2
DISP1
AP2
17
DISP2
DISP1
PCB1
K201
COMP(3)
RD
W2
YE
W3
C1
W4 RD
HIGH-WP
FAN
HEALTH-L
HEALTH-N
W6
W7
WH
BK
NC
COM
SA
BU
YE
BK
WH
RD
BU
COOL PLASMA GENERATOR
YEGN
M1
FAN MOTOR
PE
RD
BN
C2:5uF

These circuit diagrams are subject to change without notice, please refer to the one supplied with the unit.

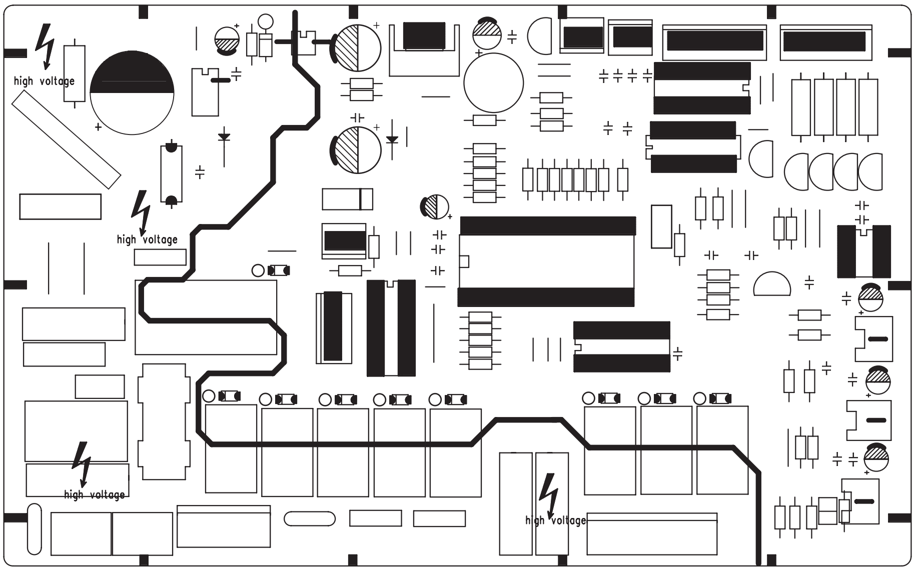
5.3 Printed Circuit Board

●TOP VIEW


9
10
11
12
13
14
15
16
17
8
7
6
5
4
3
2
1
DISP2
DISP1
REC
HIGH-WP
V172
T1
C20
WATER1
COMP
MARK AREA
TUBE
ROOM
OUTTUBE
FAN
SWING
HEAT-CTRL
T3.15AH 250V
HEALTH-L
HEALTH-N
4V
WATER
(FAN-L) (FAN-M) (FAN-H) (N)
GRJ704-A V1 2011/12/25/11 OFAN N2
N1

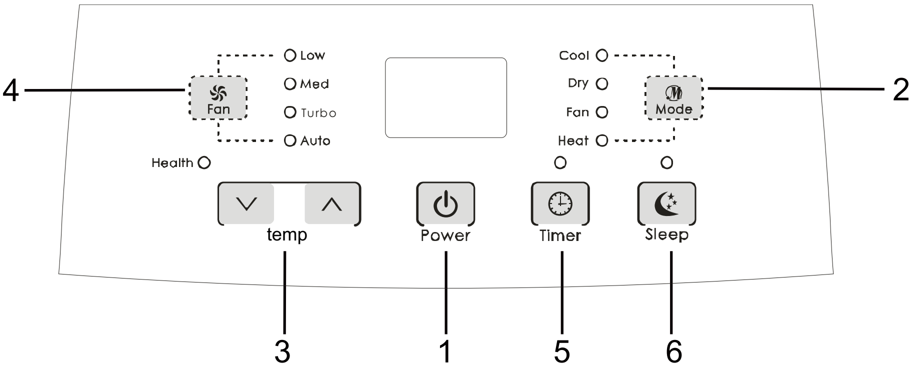
NO.	Name
1	Wiring terminal of neutral wire
2	Health live wire
3	Water-striking motor
4	4-way valve
5	AC current fan motor
6	Outdoor tube temp. sensor
7	Ambient temp. sensor
8	Indoor tube temp. sensor
9	Terminal of display board
10	Terminal of remote receiving board
11	Terminal of water level detection
12	High-frequency transformer
13	Rectifier
14	Water-striking motor
15	Compressor relay
16	Fuse
17	Health neutral wire

●BOTTOM VIEW


high voltage
high voltage
high voltage
high voltage

6. Function and Control

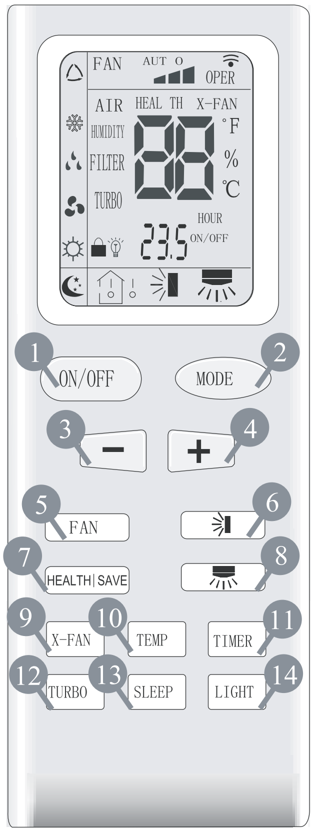
6.1 Operating Methods



1.Power
Press once to start and press once more to stop the unit.
2.Mode
Press this button to change the operation mode in order of:
GPH12AJ-K3NNA1A:COOL → DRY → FAN → HEAT;
GPC12AJ-K3NNA1A:COOL → DRY → FAN → COOL.
3." ∨ "" ∧ "
In "COOL" or "HEAT" mode, press" ∨ " once, the temperature. will decrease 1°C(°F).
Press" ∧ " once, the temperature will increase 1°C(°F). The temperature can be selected from 16°C(61°F) ~ 30°C(86°F).
4.Fan
Press this button to change the operation fan in order of: LOW→MED→TURBO→AUTO.
5.Timer
Press timer button to enter into timer setting mode. Under this mode, press " ∨ " or " ∧ " button to adjust the timer setting. Timer setting will increase or decrease 0.5 hour by pressing " ∨ " or " ∧ " button within 10 hours, while timer setting will increase or decrease 1 hour by pressing " ∨ " or " ∧ " button beyond 10 hours. After timer setting is finished, the unit will display temperature if there’s no operation for 5s. If timer function is started up, the upper indicator will keep the display status. Others, it won’t be displayed. Under timer mode, press timer button again to cancel timer mode.
6.Sleep
Press sleep button to enter into sleep mode. If the controller operates at cooling mode,after sleep mode is started up, preset temperature will increase by 2°C within 2 hours and then the unit will operate at this temperature all the time; While, if the controller operates at heating mode,after sleep mode is started up, preset temperature will decrease by 2°C within 2 hours and then the unit will operates at this temperature all the time. Sleep function is nor available for fan mode, drying mode and auto mode. If sleep function is started up, the upper indicator will keep the display status. Others, it won’t be displayed.

COOL mode
1). To select a place near the door and window, install the exhaust duct.
2). Press "MODE" key to select "COOL" mode.
3). Press " ∨ " or " ∧ " key to set the suitable temp.16°C(61°F) ~ 30°C(86°F).
HEAT mode(not for only cooling unit)
1). Press “MODE” key to select “HEAT” mode.
2). Press " ∨ " or " ∧ " key to set the suitable temp.16°C(61°F) ~ 30°C(86°F).
DRY mode
Please close the door and window, in order to obtain the better dehumidifying effect:
Press "MODE" key, select the "DRY" mode, the unit will run in the "DRY" mode, at the same time, the upper motor is running at the low speed, it is not adjustable.
FAN mode
When the unit runs in FAN mode, it can select 3 speeds.

6.2 Names and Functions Remote Controller


FAN
AUTO
OPER
AIR
HEALTH
X-FAN
HUMIDITY
FILTER
TURBO
°F
%
℃
HOUR
ON/OFF
23.5
1
2
ON/OFF
MODE
3
4
−
+
5
6
FAN
7
8
HEALTH|SAVE
9
10
11
X-FAN
TEMP
TIMER
12
13
14
TURBO
SLEEP
LIGHT

1 ON/OFF

Press it to start or stop operation.

2 MODE

Press it to select operation mode (AUTO/COOL/DRY/FAN/HEAT).

3 -

Press it to decrease temperature setting.

4 +

Press it to increase temperature setting.

5 FAN

Press it to set fan speed.

6

Press it to set swing angle.

7 HEALTH|SAVE

Press it to turn on or off health function.

8

Press it to set left & right swing angle.

9 X-FAN(X-FAN is the alternative expression of BLOW for the purpose of understanding.)

10 TEMP

11 TIMER

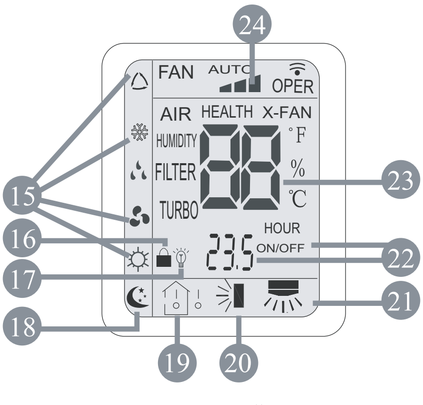
Press it to set timer ON/ timer OFF.

12 TURBO

13 SLEEP

14 LIGHT

Press it to turn on/off the light.


24
FAN
AUTO
OPER
AIR
HEALTH
X-FAN
HUMIDITY
FILTER
TURBO
°F
%
℃
HOUR
ON/OFF
23.5
15
16
17
18
19
20
21
22
23

15 MODE icon:

If MODE button is pressed, current operation mode icon △ (AUTO), ❄ (COOL), ⁂ (DRY), ✤ (FAN) or ☼ (HEAT is only for heat pump models) will show.

16 LOCK icon:

🔒 is displayed by pressing "+" and “-” buttons simultaneously. Press them again to clear the display.

17 LIGHT icon:

💡 is displayed by pressing the LIGHT button. Press LIGHT button again to clear the display.

18 SLEEP icon :

☾ is displayed by pressing the SLEEP button. Press this button again to clear the display.

19 TEMP icon:

Pressing TEMP button, ⌂ (set temperature), ⌂ (ambient temperature) , ⌂ (outdoor ambient temperature) and blank is displayed circularly.

20 Up & down swing icon:

is displayed when pressing the up & down swing button. Press this button again to clear the display.

21 Left & right swing icon:

is displayed when pressing the left & right swing button.Press this button again to clear the display.

22 SET TIME display:

After pressing TIMER button, ON or OFF will blink.This area will show the set time.

23 DIGITAL display:

This area will show the set temperature. In SAVE mode,"SE" will be displayed. During defrosting operation, “H1” will be displayed.

24 FAN SPEED display:

Press FAN button to select the desired fan speed setting(AUTO-Low-Med-High).Your selection will be displayed in the LCD windows, except the AUTO fan speed.

Remote controller description

1 ON/OFF:

Press this button to turn on the unit. Press this button again to turn off the unit.

2 MODE:

Each time you press this button,a mode is selected in a sequence that goes from AUTO, COOL,DRY, FAN, and HEAT *, as the following:

AUTO ▶COOL ▶DRY▶FAN▶ HEAT*

*Note: Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

3 + :

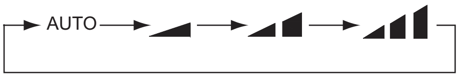
Press this button to increase set temperature. Hold it down for above 2 seconds to rapidly increase set temperature. In AUTO mode, set temperature is not adjustable.

4 -:

Press this button to decrease set temperature. Hold it down for above . 2 seconds to rapidly decrease set temperature. In AUTO mode, set temperature is not adjustable.

5 FAN :

This button is used for setting fan speed in the sequence that goes from AUTO, ◢ , ◢◢ , ◢◢◢ to then back to Auto.

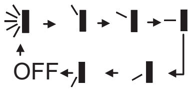


◢ Low speed ◢◢ Medium speed ◢◢◢ High speed

When setting HIGH fan speed,unit will display TURBO fan speed.

6

- Press button to start or stop up & down swing function.The remote controller defaults to simple swing condition.
- Press + button and button at the same time at unit OFF to switch between simple swing and static swing; blinks for 2 seconds.
- In static swing condition, pressing button, the swing angle of up & down louver changes as below:



- If the unit is turned off during swing operation,the louver will stop at present position.

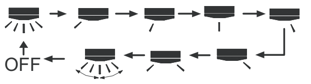
7 HEALTH|SAVE: (※**This function is not available for unit.)**

Press HEALTH part of this button to turn on or off HEALTH function.Pressing SAVE part of this button,SE is displayed and the unit goes into SAVE operation mode. Press SAVE part of the button again to cancel SAVE function. During SAVE operation, the temperature and fan speed is not adjustable.

8

- Press button to start or stop left & right swing function.The remote controller defaults to simple swing condition.
- Press + button and button at the same time at unit OFF to switch between simple swing and static swing; blinks for 2 seconds.

- In static swing condition, pressing button, the swing angle of left & right louver changes as below:



- If the unit is turned off during swing operation,the louver will stop at present position.

9 X-FAN:

Pressing X -FAN button in COOL or DRY mode,the icon "X-FAN" is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN and HEAT mode.

10 TEMP:

Press this button, could select displaying the indoor setting temperature or indoor ambient temperature.When the indoor unit firstly power on it will display the setting temperature, if the temperature's displaying status is changed from other status to" ⌂ ",displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status,that will display the setting temperature.

11 TIMER:

Press TIMER button at unit ON to set TIMER OFF; HOUR OFF blinks. Press TIMER button at unit OFF to set TIMER ON; HOUR ON blinks. In this case, pressing + or - button changes time setting. Holding down either button rapidly changes time setting (time setting range 0.5-24hours). Press TIMER button again to confirm setting; HOUR ON/OFF stops blinking. If there is not any operation of button within 5 seconds during HOUR ON/OFF blinking, TIMER setting will be cancelled.

12 TURBO:

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

13 SLEEP :

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL , HEAT (Only for models with heating function) or DRY mode to maintain the most comfortable temperature for you.

14 LIGHT:

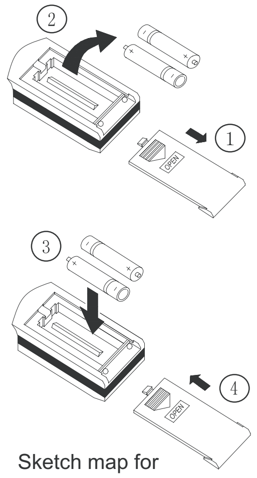
Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on , 💡 is displayed. If the light is tunrned off, 💡 disappears.

15 Combination of "+" and "-" buttons: About lock

Press "+ " and " " buttons simultaneously to lock or unlock the keypad. If the remote controller is locked, 🔒 is displayed. In this case, pressing any button, 🔒 blinks three times.

16 Combination of "MODE" and "-" buttons:About switch between Fahrenheit and Centigrade.At unit OFF, press "MODE" and "- " buttons simultaneously to switch between ℃ and ℉ .

Changing batteries and notices



Sketch map for replacing batteries

1.Remove the battery cover plate from the rear of the remote controller. (As shown in the figure)
2.Take out the old batteries.
3.Insert two new AAA1.5V dry batteries, and pay attention to the polarity.
4. Reinstall the battery cover plate.

★Notes:

- When replacing the batteries, do not use old or different batteries, otherwise, it may cause malfunction.
- If the wireless remote controller will not be used for a long time, please remove batteries to prevent damage from leaking batteries.
- The operation should be performed in its receiving range.
- It should be kept 1m away from the TV set or stereo sound sets.
- If the wireless remote controller does not operate normally, please take the batteries out and reinsert them after 30 seconds. If it still can't operate properly, replace the batteries.

6.3 Description of Each Control Operation Function and Control

1. Cooling mode

When Tamb.≥Tpreset+1°C(2°F), the unit operates in cooling mode. Meanwhile, compressor, draw water motor start operation. Indoor fan operates at set fan speed.

When Tamb.≤Tpreset-1°C(2°F), compressor and draw water motor stop operation, while indoor fan operates at set fan speed.

Tpreset-1°C(2°F)<Tamb.<Tpreset+1°C(2°F), the unit keeps original operation status.

Under this mode, 4-way valve is de-energized. The temperature setting range is 16-30°C(61-86°F).

2. Dry mode

Under this mode, set temperature and ambient temperature won't be displayed. Indoor fan operates at low fan speed.

2°C(36°F)≤Tamb.≤45°C(113°F), Compressor and draw water motor operates continuously.

3. Heating mode

When Tamb. ≤Tpreset+3°C(6°F), the unit operates in heating mode. Meanwhile, 4-way valve, compressor operates, and indoor fan operates at cold air prevention condition;

When Tpreset+3°C(6°F)<Tamb.<Tpreset+5°C(10°F), the unit keeps original operation status,

When Tamb.≥Tpreset+5°C(10°F), compressor stop operation simultaneously. 4-way valve stop operation after the compressor has stopped for 2 minutes. Indoor fan operates at blowing residual heat conditioner.

Under this mode, the temperature setting range is 16-30°C(61-86°F).

4. Fan mode

Under this mode, set temperature and ambient temperature won't be displayed. Indoor fan operates at set fan speed.

5. Auto mode

5.1 Under auto mode, standard cooling Tpreset=25°C(77°F); standard heating Tpreset=20°C(68°F).

5.2 Heat pump unit:

Tamb.>26°C(79°F), the unit turns into auto cooling mode; Tamb.< 20°C(68°F), the unit turns into heating mode;

23°C(73°F)≥Tamb. ≥20°C(68°F), if the unit operates at heating mode previously, the unit keeps heating operation status. If the unit didn't operate at heating mode previously, the unit will turn to dry mode; 26°C(79°F)≥Tamb. ≥24°C(74°F), the unit turns into auto dry mode.

For the first energization,26°C(79°F)≥Tamb. ≥20°C(68°F),the unit turns into drying operation mode.

6.Other function

6.1 Timer

6.1.1 General Timer

Timer ON can be set at unit OFF. If selected ON time is reached, the unit will start to operate according to previous setting status. Time setting range is 0.5-24hr in 30-minute increments.

Timer OFF can be set at unit ON. If selected OFF time is reached, the unit will stop operation. Time setting range is 0.5-24hr in 30-minute increments.

6.1.2 Clock Timer

Timer ON:

If timer ON is set during operation of the unit, the unit will continue to operate. If timer ON is set at unit OFF, upon ON time reaches the unit will start to operate according to previous setting status.

Timer OFF:

If timer OFF is set at unit OFF, the system will keep standby status. If timer OFF is set at unit ON, upon OFF time reaches the unit will stop operation.

6.2 Sleep function

When setting sleep function under cooling mode, Tpreset will increase 1°C (2°F) after 1 hours. 2 hours later, Tpreset will increase 2°C(4°F) automatically. The upper limit of temperature is 30°C (86°F).

When setting sleep function under heating mode, Tpreset will decrease 1°C (2°F) after 1 hours. 2 hours later, Tpreset will decrease 2°C (4°F) automatically. The lower limit of temperature is 30°C (86°F).

6.3 Buzzer

Upon energization or operation, the buzzer will give out sound.

6.4 Control button

1). ON/OFF button

Turn on or turn off unit.

2). Mode button

The mode will be switched as below sequence:

Heat pump unit: cooling-drying-fan-heating

Cooling only unit: Cooling-drying-fan

3). Temperature "-" button

If set temperature under ON status, temperature will decrease 1°C or °F after each pressing of this button. The temperature can't be set lower than 16°C or 61°F. The button is invalid under auto, drying and fan mode.Adjust timer time in timer setting status.

4). Temperature "+" button

If set temperature under ON status, temperature will increase 1°C or °F after each pressing of this button. The temperature can't be set higher than 30°C or 86°F. The button is invalid under auto, drying and fan mode.Adjust timer time in timer setting status.

6.5 Display

6.5.1 Display of indicator

When turning of the unit, the current operation mode indicator will be displayed.(LED lamps for Cooling, Heating, Drying and Fan)

6.5.2 Dual-8 display

When the unit is turned on for the first time, niexie tube is defaulted to display set temperature. When the unit received the signal of set temperature, nixie tube display set temperature. When the unit received the signal of ambient temperature, the nixie tube displays current indoor ambient temperature.

6.5.3 Light control

When the unit is turned on for the first time,light is defaulted ON.If setting light ON by remote controller,indicator and dual-8 nixie tube displays current set status. If setting light OFF by remote controller, light will be turned off immediately. If there's operation for button on panel and remote controller when setting light OFF by remote controller, indicator and dual-8 nixie tube will display set status for 5s and then turn off the light.

6.6 Auto fan speed control

6.6.1 Heating mode

Under auto heating or normal heating mode, auto fan speed will operate as below mode:
When Tamb.≤Tpreset+Tcompensation-2°C(4°F), indoor fan operates at high fan speed;
When Tpreset+ Tcompensation-2°C(4°F)<Tamb.<Tpreset + Tcompensation, indoor fan operates at middle fan speed;
When Tamb.≥Tpreset+Tcompensation, indoor fan operates at low speed;

6.6.2 Cooling mode

Under auto cooling or normal cooling mode, auto fan speed will operate as below mode:
When Tamb.≥Tpreset+ Tcompensation+2°C(4°F), indoor fan operates at high fan speed;
When Tpreset+ Tcompensation<Tamb.<Tpreset + Tcompensation + 2°C(4°F), indoor fan operates at middle fan speed;
When Tamb.≤Tpreset+Tcompensation, indoor fan operates at low speed;
Auto fan under fan mode is as the same of cooling mode;

6.7 Power-off memory function

Memory content: mode, light, set temperature, set fan speed, swing, health. When power failure, the unit will operate at previous operation status automatically after power recovered.

6.8 X-FAN control mode

X-FAN function can be set under cooling and dry mode (X-FAN function is unavailable under auto, heating and fan mode)

7. Protection function

7.1 Water overflow protection

Buzzer will give out sound for 8 times for warning. The complete unit will stop operation.
Error code H8 is displayed and heating indicator OFF 3s and blinks 8 times.

7.2 Freeze prevention protection

Under freeze prevention protection, compressor and draw water motor stop operation. Indoor fan operates at set fan speed.

7.3 Compressor protection

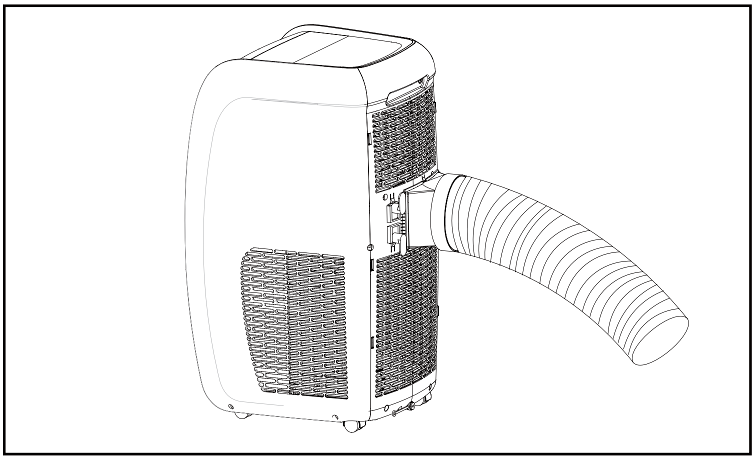
Compressor can be restarted only after 3 minutes delayed.

7. Installation Instructions

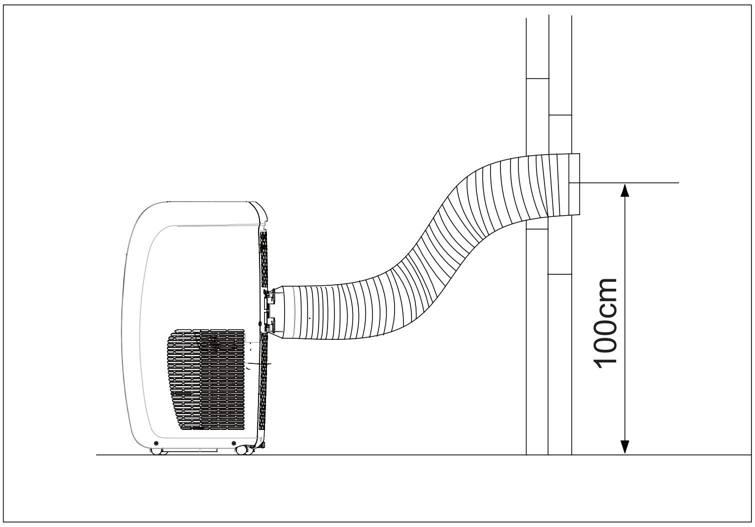
Accessories and Installation of Heat Exhaust Host

⚠

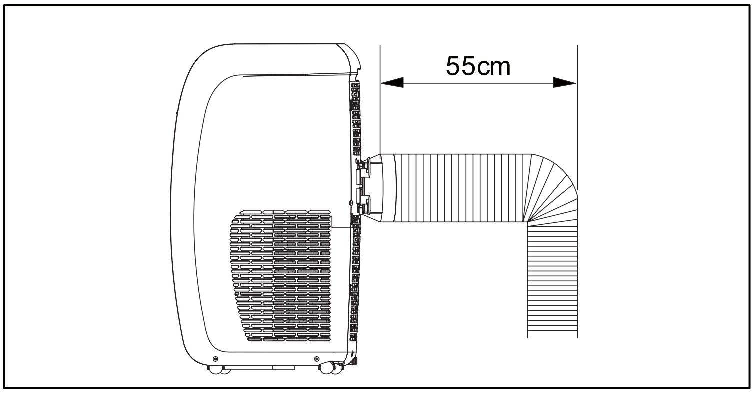
- Length range of exhaust pipe should be 50~150cm.It is recommended to use it with shortest length.
- When installing, exhaust pipe should be as flat as possible.Don't prolong the pipe or connect it with other exhaust pipe, orit would cause abnormal operation.

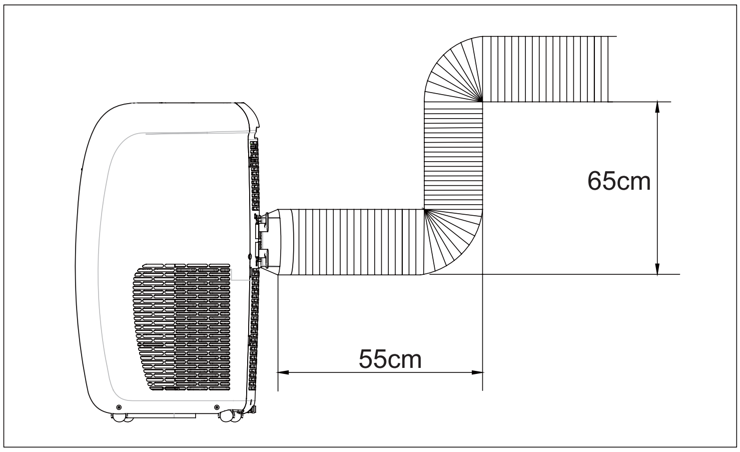


- Correct installation is as shown in figure (When installing it on wall, height of hall should be about 40 -100cm from floor).

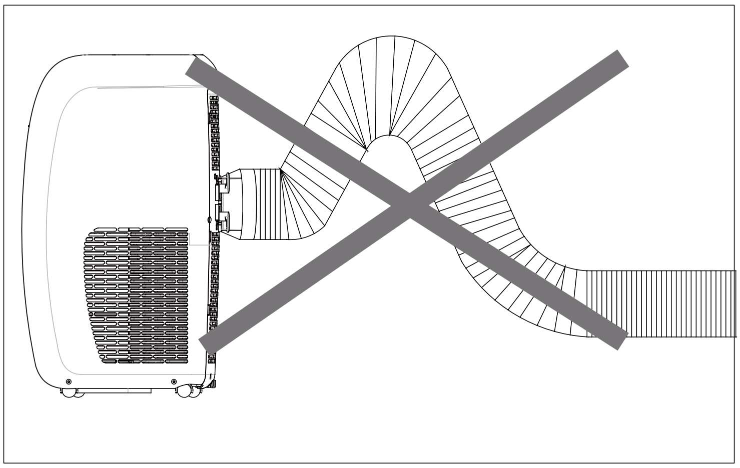


- If the pipe are to be bent, please install it by considering following dimension.



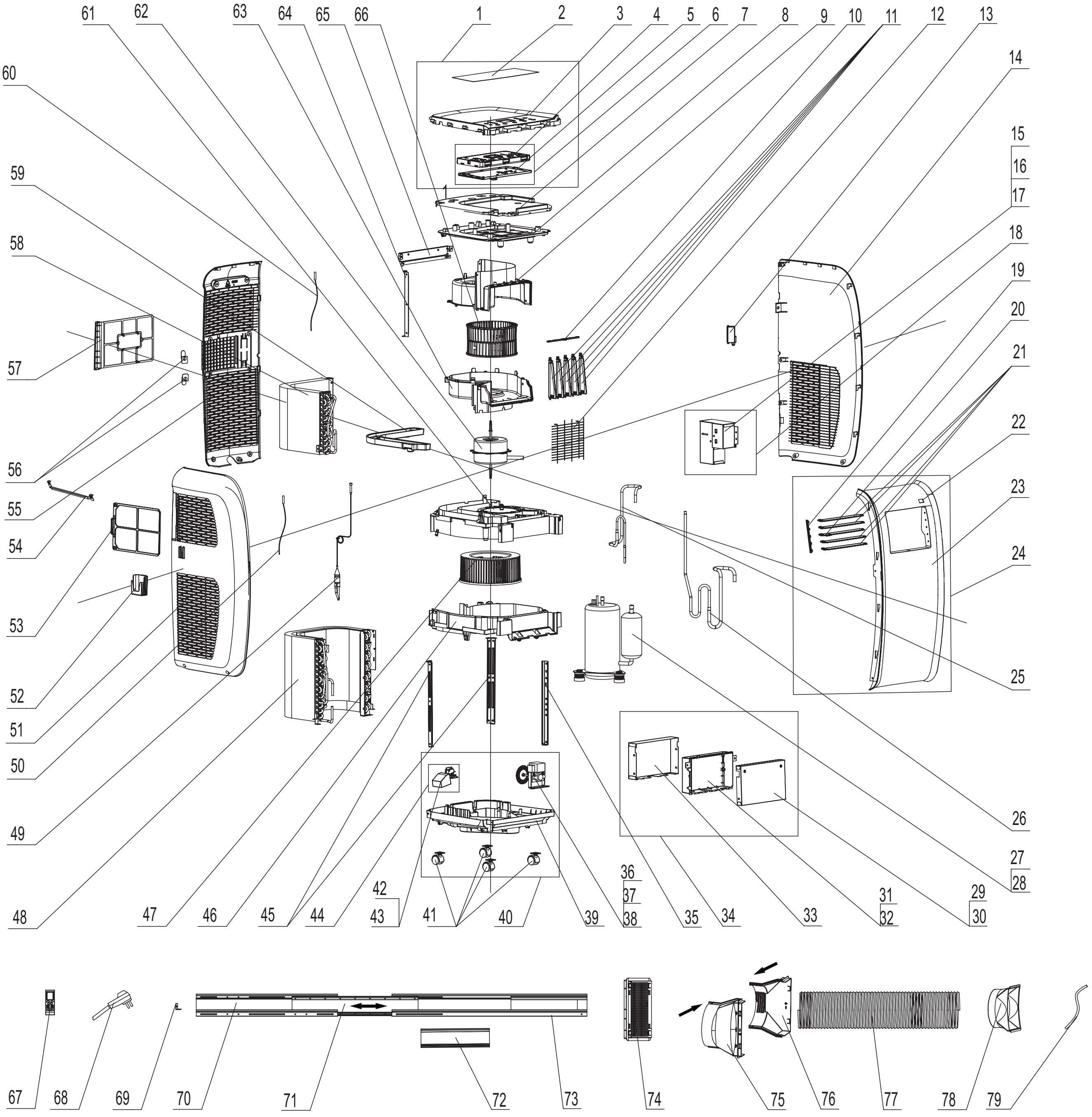


- Wrong installation is shown in following figure (If the pipe is bent too much, it would easily cause malfunction.)



8. Exploded Views and Parts List

Models: GPC12AJ-K3NNA1A GPC12AJ-K3NNA1A(Cold Plasma)

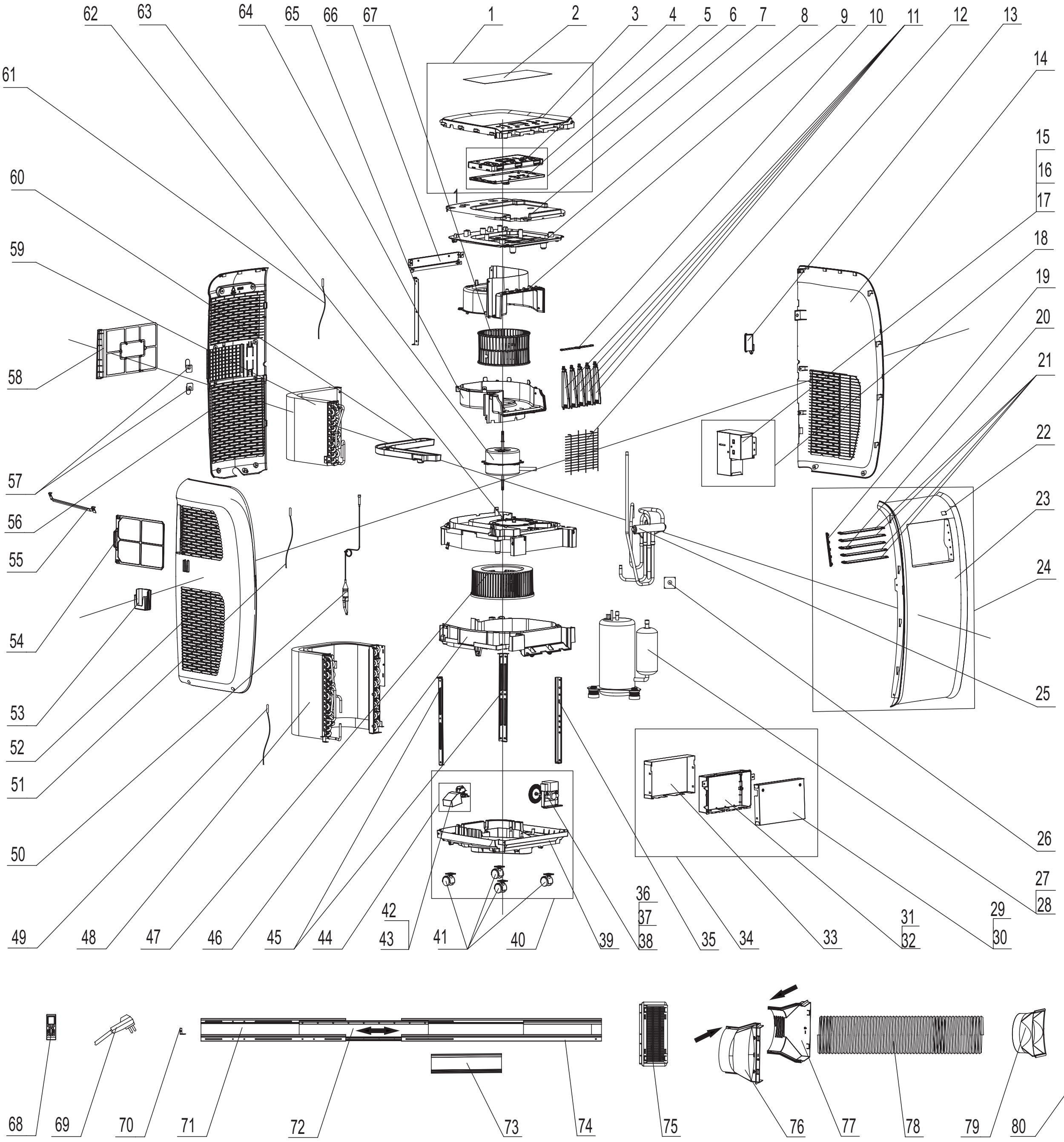

61
62
63
64
65
66
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
67
68
69
70
71
72
73
74
75
76
77
78
79

No.	Description	Part Code		Qty
		GPC12AJ-K3NNA1A	GPC12AJ-K3NNA1A(Cold Plasma)	
	Product Code	CK010017900	CK010017901	
1	Top Cover Assy	2012614901	20126149	1
2	Membrane	63066065	63066065	1
3	Top Cover	20126148	20126148	1
4	Display Box	20116051	20116051	1
5	Display Cover	20126147	20126147	1
6	Display Board	30567024	30567023	1
7	Foam (Baffle)	12316227	12316227	1
8	Baffle Plate	26116120	26116120	1
9	Propeller Housing 2 (Upper)	22206523	22206523	1
10	Swing Lever	10586026	10586026	1
11	Air Louver	10516084	10516084	5
12	Rear Grill	01476028	01476028	1
13	Cold Plasma Generator	/	1114001602	1
14	Right Side Plate	20056158	20056158	1
15	Capacitor Box Sub-Assy	01406055	01406055	1
16	Capacitor Box	01416024	01416024	1
17	Capacitor CBB61	33010064	33010064	1
18	Capacitor CBB65	33010743	33010743	1
19	Guide Blade Lever	10586027	10586027	1
20	Guide Louver 2	10516086	10516086	1
21	Guide Louver 1	10516085	10516085	4
22	Remote Control Display Window	22436061	22436061	1
23	Front Panel	20006148	20006148	1
24	Front Panel Assy	20006147	20006147	1
25	Discharge Tube Sub-assy	03636574	03636574	1
26	Inhalation Tube Sub-assy	03636548	03636548	1
27	Compressor and Fittings	00103781G	00103781G	1
28	Compressor Gasket	76710247	76710247	3
29	Electric Box Cover	20126146	20126146	1
30	Shield Cover of Electric Box 2	01596026	01596026	1
31	Electric Box	20116050	20116050	1
32	Main Board	30137027	30137028	1
33	Shield Cover of Electric Box 1	01596025	01596025	1
34	Electric Box Assy	0140605403	0140605402	1
35	Supporting Board 3	01796037	01796037	1
36	Motor holder (Shaded Pole Motor)	01706211	01706211	1
37	Splash Water Flywheel	10336003	10336003	1
38	Fan Motor	1501606202	1501606202	1
39	Chassis Sub-assy	22226087	22226087	1
40	Chassis Assy	01206080	01206080	1
41	Castor	24236009	24236009	4
42	water Level Switch Base	26156041	26156041	1
43	Water Level Switch	45010211	45010211	1
44	Water Level Switch Sub-assy	26156045	26156045	1
45	Supporting Board 1	01796035	01796035	2

46	Diversion Circle	10376048	10376048	1
47	Centrifugal Fan	10316070	10316070	1
48	Condenser Assy	01106081	01106081	1
49	Capillary Sub-assy	03006249	03006249	1
50	Temperature Sensor	390000598	390000598	1
51	Left Side Plate	20056157	20056157	1
52	Remote controller Box	20116052	20116052	1
53	Filter Sub-assy 2	11126086	11126086	1
54	Guide Strip(Filter 2)	01776002	01776002	1
55	Rear Plate	26116167	26116167	1
56	Thread Rolling Hook	71016007	71016007	2
57	Filter Sub-assy 1	11126085	11126085	1
58	Evaporator Assy	01006096	01006096	1
59	Foam (Water Tray)	12316046	12316046	1
60	Temperature Sensor	390000451	390000451	1
61	Motor Holder	26156081	26156081	1
62	Fan Motor	15016054	1501606202	1
63	Propeller Housing 1 (Upper)	22206524	22206524	1
64	Supporting Board 2	01796036	01796036	1
65	Supporting Board 4	01796038	01796038	1
66	Centrifugal Fan	10316070	10316070	1
67	Remote Controller	305100611	305100611	1
68	Power Cord	4002046429	4002046429	1
69	Window Locking Bracket	02111151	02111151	1
70	Back Plate 2	26116175	26116175	1
71	Adjusting plate	26116121	26116121	1
72	Baffle Plate	26116120	26116120	1
73	Back Plate1	2611611401	2611611401	1
74	Rear Grill	01476028	01476028	1
75	Rear Clip (upper)	26116132	26116132	1
76	Rear Clip (nether)	26116135	26116135	1
77	Pipe	05236058	05236058	1
78	Tie-in 1	06646024	06646024	1
79	Drainage Hose	05230013	05230013	1

The data above are subject to change without notice.

**Models: GPH12AJ-K3NNA1A GPH12AJ-K3NNA1A(Dark Brown)
GPH12AJ-K3NNA1A(Cold Plasma)**


62
63
64
65
66
67
1
2
3
4
5
6
7
8
9
10
11
12
13
61
14
15
16
17
60
18
59
19
20
21
58
22
57
56
23
55
24
54
53
25
52
51
26
50
27
28
36
37
42
29
31
49
48
47
46
45
44
43
41
40
39
38
35
34
33
32
30
68
69
70
71
72
73
74
75
76
77
78
79
80

No.	Description	Part Code			Qty
		GPH12AJ-K3NNA1A	GPH12AJ-K3NNA1A(Cold Plasma)	GPH12AJ-K3NNA1A(Dark Brown)	
	Product Code	CK010018000	CK010018001	CK010018003	
1	Top Cover Assy	2012614901	20126149	20126198	1
2	Membrane	63066065	63066065	63066507	1
3	Coping	20126148	20126148	2012614803	1
4	Display Box	20116051	20116051	20116051	1
5	Display Cover	20126147	20126147	20126147	1
6	Display Board	30567024	30567023	30567024	1
7	Foam (Baffle)	12316227	12316227	12316227	1
8	Baffle Plate	2611612001	2611612001	2611612001	1
9	Propeller Housing 2 (Upper)	22206523	22206523	22206523	1
10	Swing Lever	10586026	10586026	10586026	1
11	Air Louver	10516084	10516084	10516084	5
12	Rear Grill	01476040	01476040	01476040	1
13	Cold Plasma Generator	/	1114001602	/	1
14	Right Side Plate	20056158	20056158	20056158	1
15	Capacitor Box Sub-Assy	01406055	01406055	01406055	1
16	Capacitor Box	01416024	01416024	01416024	1
17	Capacitor CBB61	33010064	33010064	33010064	1
18	Capacitor CBB65	33010743	33010743	33010743	1
19	Guide Blade Lever	10586027	10586027	1058602701	1
20	Guide Louver 2	10516086	10516086	1051608603	1
21	Guide Louver 1	10516085	10516085	1051608503	4
22	Remote Control Display Window	22436061	22436061	2243606102	1
23	Front Panel	20006148	20006148	2000614804S	1
24	Front Panel Assy	20006147	20006147	20006172	1
25	4-Way Valve Assy	03026006	03026006	03026006	1
26	Magnet Coil	4300040047	4300040047	4300040047	1
27	Compressor and Fittings	00103781G	00103781G	00103781G	1
28	Compressor Gasket	76710247	76710247	76710247	3
29	Electric Box Cover	20126146	20126146	20126146	1
30	Shield Cover of Electric Box 2	01596026	01596026	01596026	1
31	Electric Box	20116050	20116050	20116050	1
32	Main Board	30137029	30137030	30137029	1
33	Shield Cover of Electric Box 1	01596025	01596025	01596025	1
34	Electric Box Assy	0140605401	01406054	0140605401	1
35	Supporting Board 3	01796037	01796037	01796037	1
36	Motor holder (Shaded Pole Motor)	01706211	01706211	01706211	1
37	Splash Water Flywheel	10336003	10336003	10336003	1
38	Fan Motor	1501606202	1501606202	1501606202	1
39	Chassis Sub-assy	22226087	22226087	22226087	1
40	Chassis Assy	01206080	01206080	01206080	1
41	Castor	24236009	24236009	24236009	4
42	water Level Switch Base	26156041	26156041	26156041	1
43	Water Level Switch	45010211	45010211	45010211	1
44	Water Level Switch Sub-assy	26156045	26156045	26156045	1
45	Supporting Board 1	01796035	01796035	01796035	2
46	Diversion Circle	10376048	10376048	10376048	1
47	Centrifugal Fan	10316070	10316070	10316070	1
48	Condenser Assy	01106081	01106081	01106081	1
49	Temperature Sensor	390000372	390000372	390000372	1
50	Capillary Sub-assy	03006517	03006517	03006517	1
51	Temperature Sensor	390000451	390000451	390000451	1
52	Left Side Plate	20056157	20056157	20056157	1
53	Remote controller Box	20116052	20116052	20116052	1

54	Filter Sub-assy 2	11126086	11126086	11126086	1
55	Guide Strip(Filter 2)	01776002	01776002	01776002	1
56	Rear Plate	26116167	26116167	26116167	1
57	Thread Rolling Hook	71016007	71016007	71016007	2
58	Filter Sub-assy 1	11126085	11126085	11126085	1
59	Evaporator Assy	01006096	01006096	01006096	1
60	Foam (Water Tray)	12316046	12316046	12316046	1
61	Temperature Sensor	390000598	390000598	390000598	1
62	Motor Holder	26156081	26156081	26156081	1
63	Fan Motor	1501606202	1501606202	1501606202	1
64	Propeller Housing 1 (Upper)	22206524	22206524	22206524	1
65	Supporting Board 2	01796036	01796036	01796036	1
66	Supporting Board 4	01796038	01796038	01796038	1
67	Centrifugal Fan	10316070	10316070	10316070	1
68	Remote Controller	305100611	305100611	305100611	1
69	Power Cord	4002046429	4002046429	4002046429	1
70	Window Locking Bracket	02111151	02111151	02111151	1
71	Back Plate 2	26116175	26116175	26116175	1
72	Adjusting plate	26116121	26116121	26116121	1
73	Baffle Plate	2611612001	2611612001	2611612001	1
74	Back Plate1	2611611401	2611611401	2611611401	1
75	Rear Grill	01476040	01476040	01476040	1
76	Rear Clip (upper)	26116132	26116132	26116132	1
77	Rear Clip (nether)	26116135	26116135	26116135	1
78	Pipe	05236058	05236058	05236058	1
79	Tie-in 1	06646024	06646024	06646024	1
80	Drainage Hose	05230013	05230013	05230013	0.3

The data above are subject to change without notice.

9. Troubleshooting

9.1 Confirm below 2 points before any failures occurred

(1) Confirm power supply is OK
Check the plug of power line is normal energized and work.

(2) Confirm power voltage
Make sure the voltage is between normal range, if exceed the range, the unit may abnormally runs.AC 115V+/-10%

9.2 Error Code

Please see the blow failure contents and repair methods w hen the unit is energized or the error code occurred during the unit runs.

No.	Malfunction Name	Display Method of Indoor Unit				A/C Status	Possible Causes
		Error Code	Indicator lamp (During blinking, ON for 0.5S and OFF for 0.5 S)				
			Operation Lamp	COOL Lamp	HEAT Lamp		
1	Indoor ambient temperature sensor is open/ short- circuited	F1		OFF 3S and blinks once		The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except indoor fan operates, other loads （such as compressor, outdoor fan, 4-way valve） stop operation; During heating operation, the complete unit stops operation.	1. The wiring terminal between indoor ambient temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to trip-over of the parts on controller; 3.Indoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
2	Indoor evaporator temperature sensor is open/ short-circuited	F2		OFF 3S and blinks twice		The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except indoor fan operates, other loads stop operation; During heating operation, the complete unit stops operation.	1. The wiring terminal between indoor evaporator temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3.Indoor evaporator temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.

3	Outdoor condenser temperature sensor is open/ short-circuited	F4		OFF 3S and blinks 4 times		The unit will stop operation as it reaches the temperature point. During cooling and drying operation, compressor stops and indoor fan operates; During heating operation, the complete unit stops operation.	1. The wiring terminal between outdoor condenser temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3.Outdoor condenser temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken.
4	Overcurrent protection	E5	OFF 3S and blinks 5 times .			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	1. Unstable supply voltage. Normal fluctuation shall be within 10% of the rated voltage on the nameplate. 2. Supply voltage is too low and load is too high. 3. Measure the current of live wire on main board. If the current isn't higher than the overcurrent protection value, please check the controller. 4. The indoor and outdoor heat exchangers are too dirty, or the air inlet and air outlet are blocked. 5. The fan motor is not running. Abnormal fan speed: fan speed is too low or the fan doesn't run 6. The compressor is not running normally. There is abnormal sound, oil leakage or the temperature of the shell is too high, etc. 7. There's blockage in the system （filth blockage, ice plug, greasy blockage, Y-valve hasn't been opened completely）
5	Over-blow protection	H8					Refer to th e indication of instruction to discharge the water of chassis.

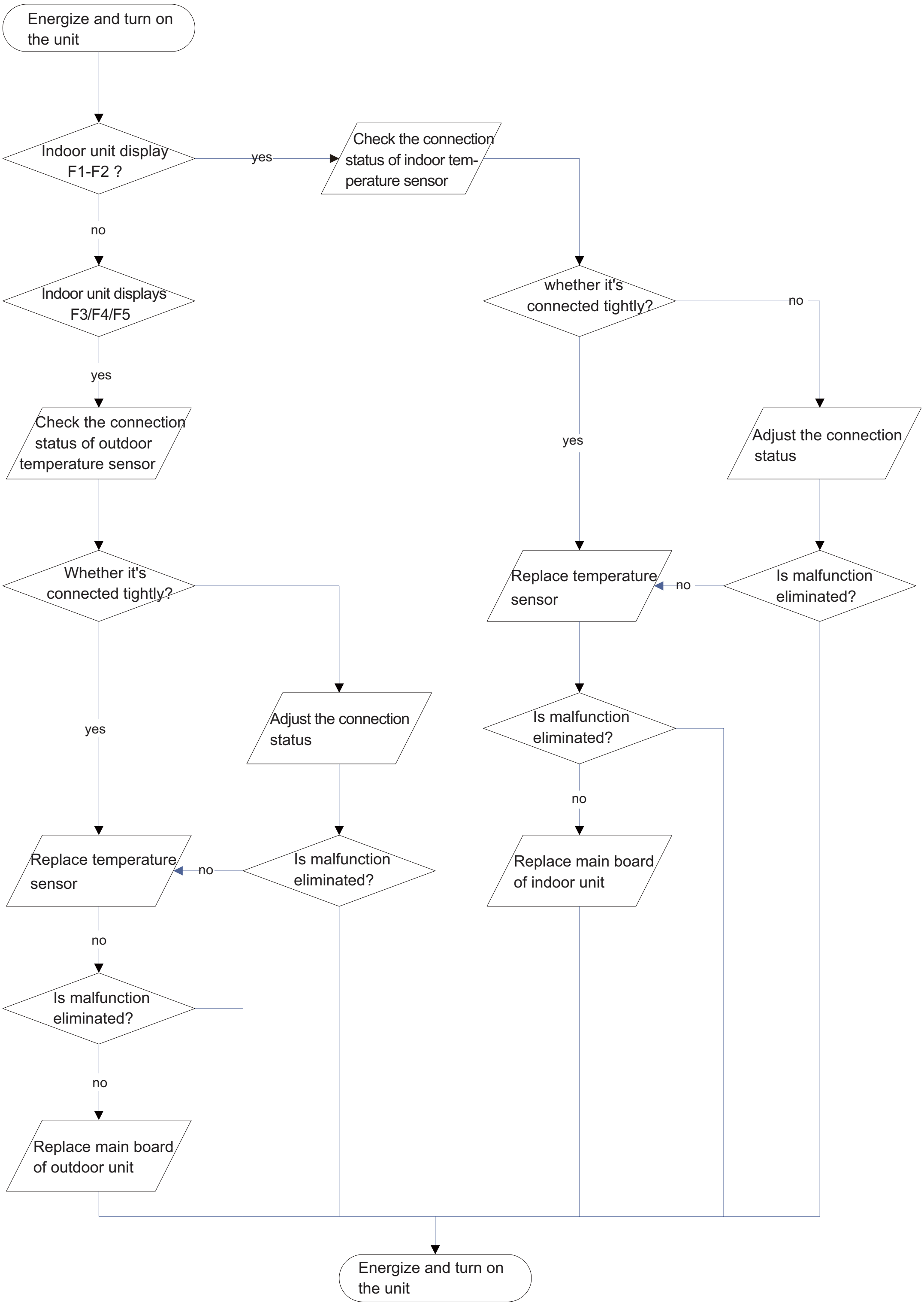
9.3 Failure Repair

9.3.1 Failure for temperature sensor

Main test point:

- If the outdoor environment temperature is in normal range
- If fan motor normally runs.
- If the radiating environment of indoor and outdoor unit is good

Check the flow process of failure is:

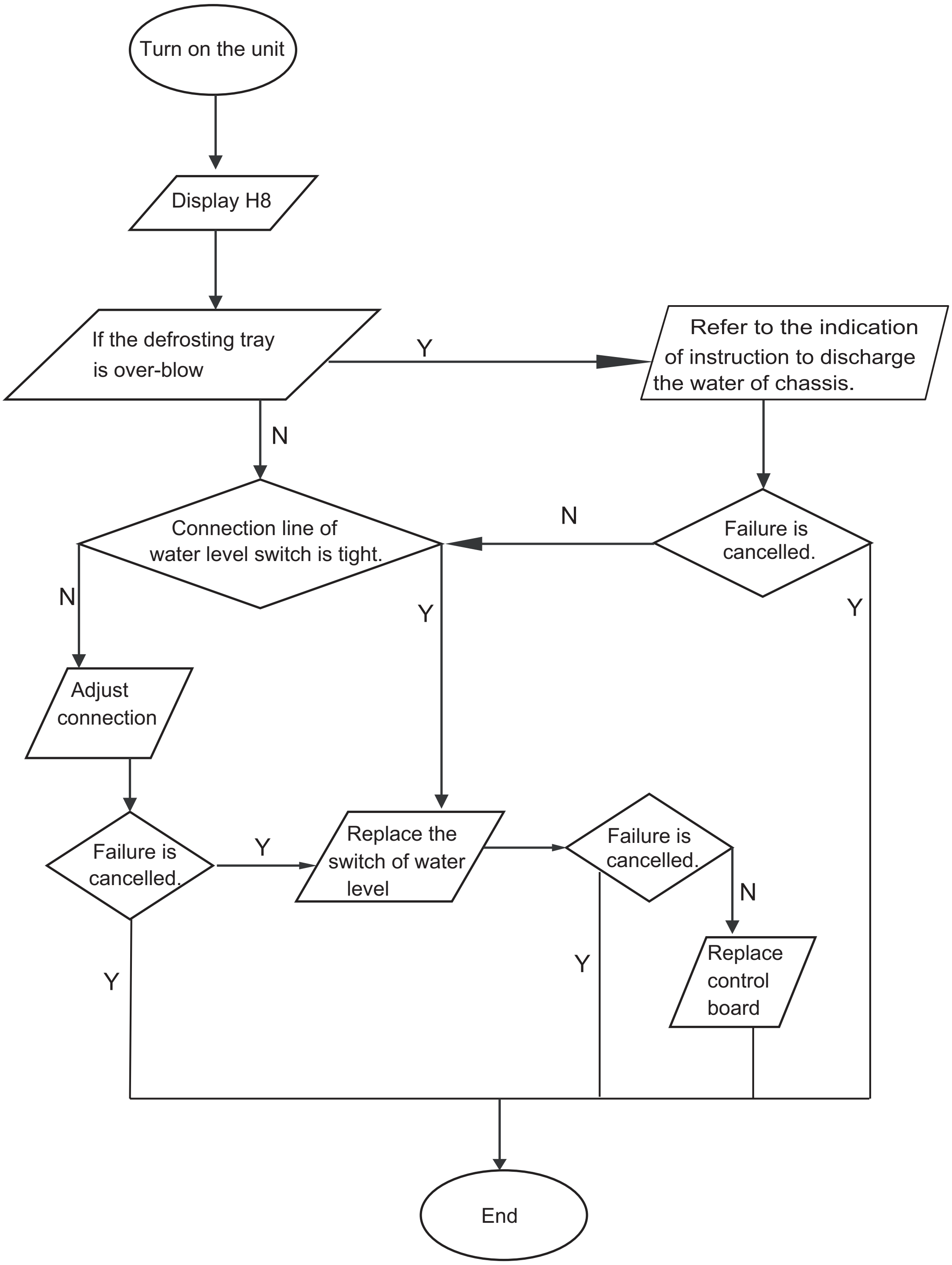

Energize and turn on the unit
Indoor unit display F1-F2 ?
yes
Check the connection status of indoor temperature sensor
no
Indoor unit displays F3/F4/F5
whether it's connected tightly?
no
yes
Check the connection status of outdoor temperature sensor
yes
Adjust the connection status
Whether it's connected tightly?
Replace temperature sensor
no
Is malfunction eliminated?
yes
Adjust the connection status
Is malfunction eliminated?
no
Replace temperature sensor
no
Is malfunction eliminated?
Replace main board of indoor unit
no
Is malfunction eliminated?
no
Replace main board of outdoor unit
Energize and turn on the unit

9.3.2 Failure for switch of water level

Main test point:

- If the defrosting tray is over-blow
- If the connection line of water level switch is good.
- If the water level switch is damaged.

Check the flow process of failure is:

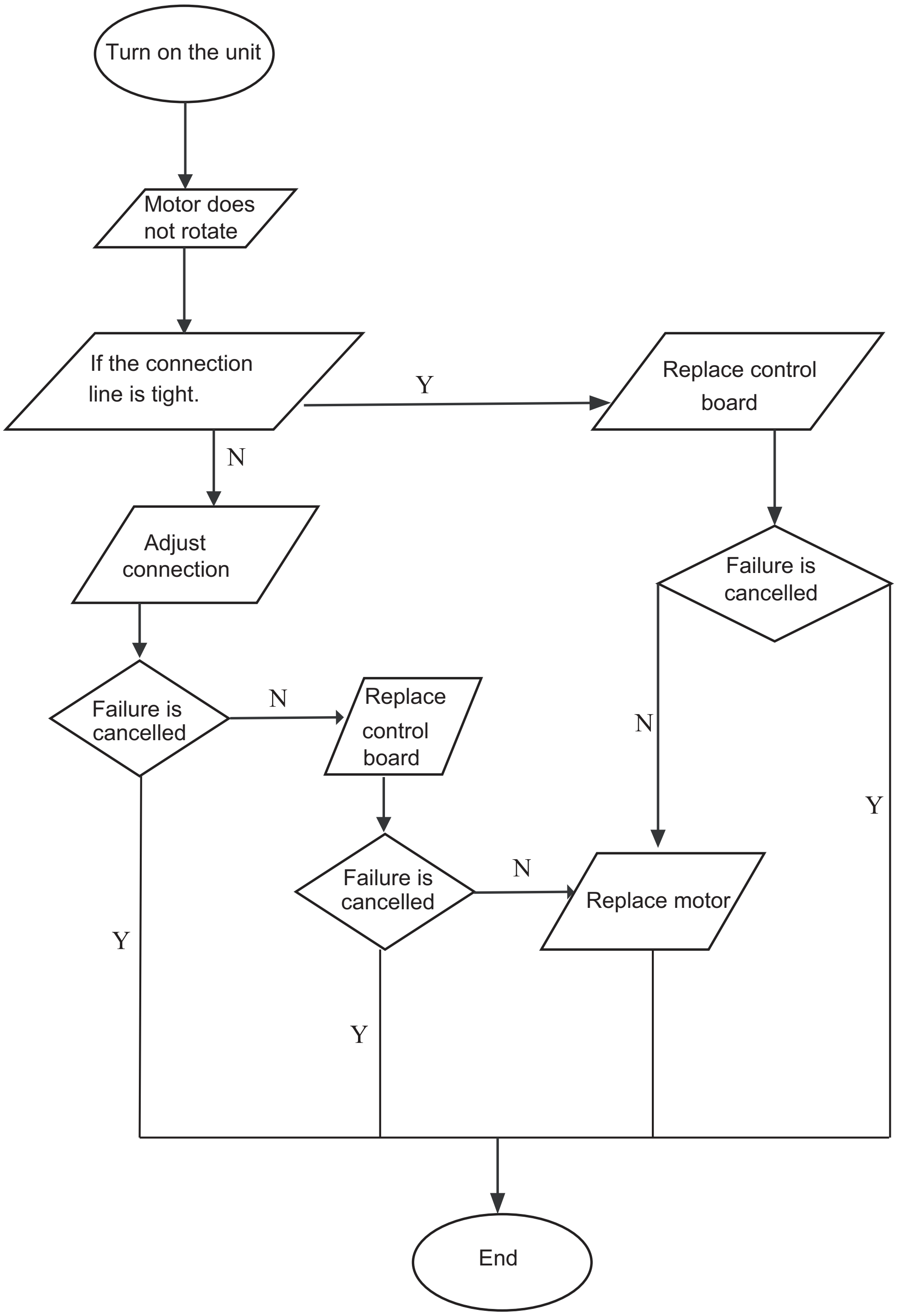

Turn on the unit
Display H8
If the defrosting tray is over-blow
Y
Refer to the indication of instruction to discharge the water of chassis.
N
Connection line of water level switch is tight.
N
Failure is cancelled.
N
Y
Y
Adjust connection
Failure is cancelled.
Y
Replace the switch of water level
Failure is cancelled.
N
Y
Y
Replace control board
End

9.3.3 Motor failure (including upper motor and lower motor)

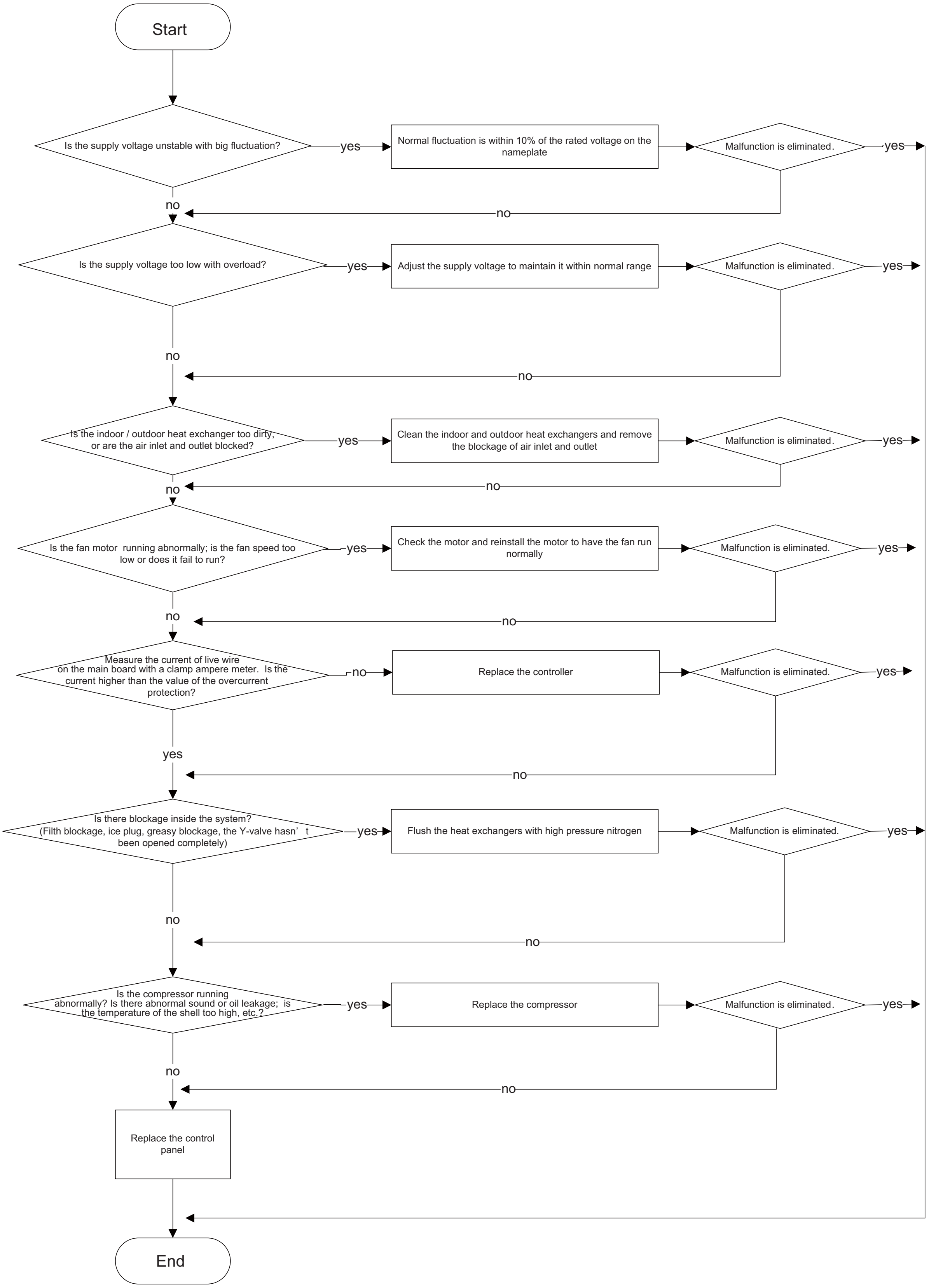
Main test point:

- If the motor does not rotate.

Check the flow process of failure is:


Turn on the unit
Motor does not rotate
If the connection line is tight.
Y
Replace control board
N
Adjust connection
Failure is cancelled
N
Replace control board
Failure is cancelled
N
Y
Failure is cancelled
N
Replace motor
Y
Y
End

9.3.4 Overcurrent protection (E5)


Start
Is the supply voltage unstable with big fluctuation?
yes
Normal fluctuation is within 10% of the rated voltage on the nameplate
Malfunction is eliminated.
yes
no
no
Is the supply voltage too low with overload?
yes
Adjust the supply voltage to maintain it within normal range
Malfunction is eliminated.
yes
no
no
Is the indoor / outdoor heat exchanger too dirty, or are the air inlet and outlet blocked?
yes
Clean the indoor and outdoor heat exchangers and remove the blockage of air inlet and outlet
Malfunction is eliminated.
yes
no
no
Is the fan motor running abnormally; is the fan speed too low or does it fail to run?
yes
Check the motor and reinstall the motor to have the fan run normally
Malfunction is eliminated.
yes
no
no
Measure the current of live wire on the main board with a clamp ampere meter. Is the current higher than the value of the overcurrent protection?
no
Replace the controller
Malfunction is eliminated.
yes
yes
no
Is there blockage inside the system? (Filth blockage, ice plug, greasy blockage, the Y-valve hasn't been opened completely)
yes
Flush the heat exchangers with high pressure nitrogen
Malfunction is eliminated.
yes
no
no
Is the compressor running abnormally? Is there abnormal sound or oil leakage; is the temperature of the shell too high, etc.?
yes
Replace the compressor
Malfunction is eliminated.
yes
no
no
Replace the control panel
End

9.4 Failure Phenomenon and Solution

Phenomenon		Possible results	Solution
The unit does not start-up	There is no action after the unit is energized.	No power supply	Check the power circuit
		The power plug is not well insert or bad connection.	Check the plug is well insert, and make sure the connection is good.
		The fuse is damaged.	Replace the fuse
		The connection line of indoor unit is loose.	Re-insert it refer to the circuit diagram.
		Controller (power circuit, slug, crystal vibration) is damaged.	Replace controller
	The buzzer give out a beep when the unit is energized. But does not start-up if press ON/OFF.	indoor environment temperature sensor is damaged (bad contact, loose, leading-out wire is damaged, the resistance of temperature's terminal is abnormal and so on).	Temperature sensor is well connected or replace temperature sensor.
	LED displays "H8", buzzer alarms 8 times (over-blow protection)	The water on the chassis is over-blow.	Drainage the wate
		Switch circuit of water level is damaged.	Check the switch of water level and circuit.
Turn on the fan, and the compressor does not start-up.	Turn on or turn off compressor frequently under cooling or dry mode. (abnormal anti-freeze protection)	Filter is dirty.	Clean the filter.
		The inlet and outlet port are blocked.	Move the barrier or move the unit ro empty place.
		The rotational speed of fan is slow, or fan does not rotate.	Check if the fan motor's supply circuit of controller is normal, if the connection wire of motor is loosen, and failure for capacity or motor.
		The refrigerant is leakage.	Detect the leakage or charge refrigerant.
		The cooling system is blocked.	Clean pipe system and recharge.
		Compressor (or its capacity) is failure.	Replace compressor (capacity)
		Failure for tube temp. sensor (bad contact, loose,leading-out wire is damaged, the resistance of temperature's terminalis abnormal)	Temperature sensor is well connected or replace temperature sensor.
		Controller is damaged.	Replace the controller.
	Display "E5"	The power is low.	Insure the power is under normal range and use voltage regulator.
		Load is large (the system or port is blocked or dirty; or failure for fan and compressor)	Solve failure or replace failure component

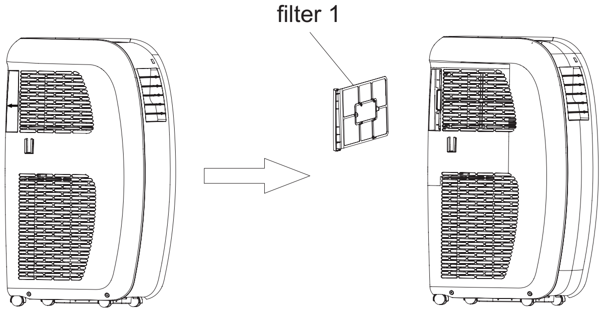
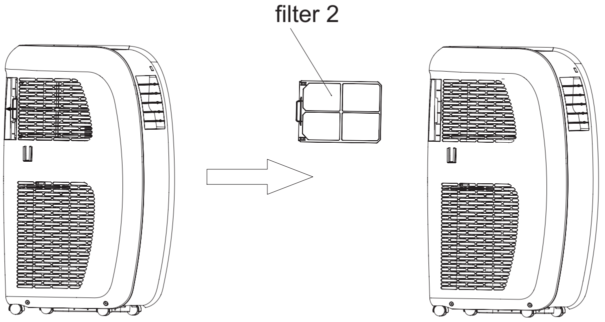
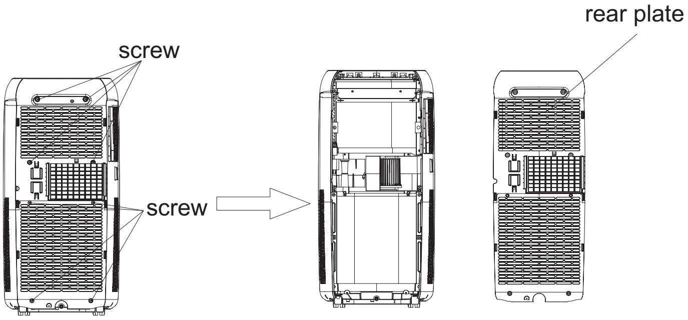
Phenomena	Possible results	Solution
Poor cool operation	Filter is dirty.	Clean the filter.
	The inlet and outlet port are blocked.	Move the barrier or move the unit ro empty place.
	The refrigerant is leakage.	Detect the leakage or charge refrigerant.
	The cooling system is blocked.	Clean pipe system and recharge.
	The rotational speed of fan is slow, or fan does not rotate.	Check if the fan motor's supply circuit of controller is normal, if the connection wire of motor is loosen, and failure for capacity or motor.
Set cooling (dry) mode, but no cool air blow out.	Indoor temperature is less than preset temperature (under cooling)	Normal phenomena (adjust lower preset temperature)
	Evaporator is frosting.	The system is defrost, and abnormally runs after defrost.
Abnormal noise	Sparepart is loose.	Bind the spareparts.
	The fan is decentred.	Replace the fan.
	Compressor is damaged.	Replace the compressor.
Not stop after over-blow	The switch of water level is open circuit.	Check and repair switch loop of water level.
Over-blow protection frequent	Kick motor is damaged.	Replace the kick motor.

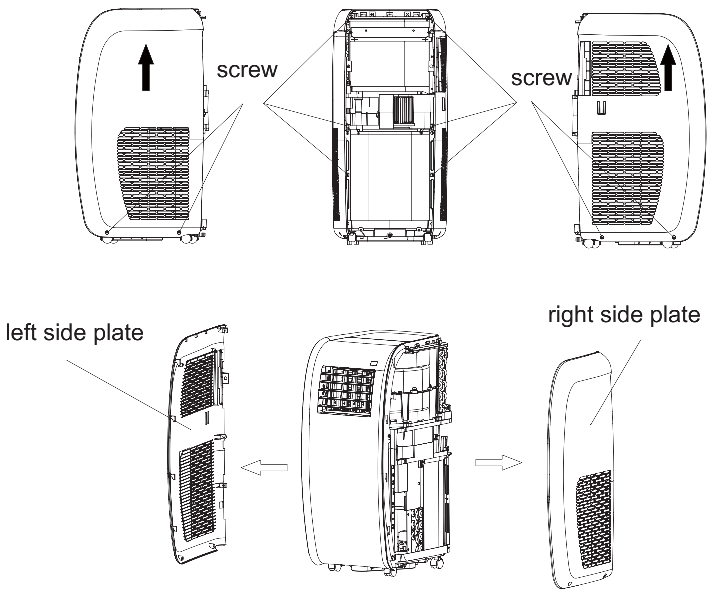
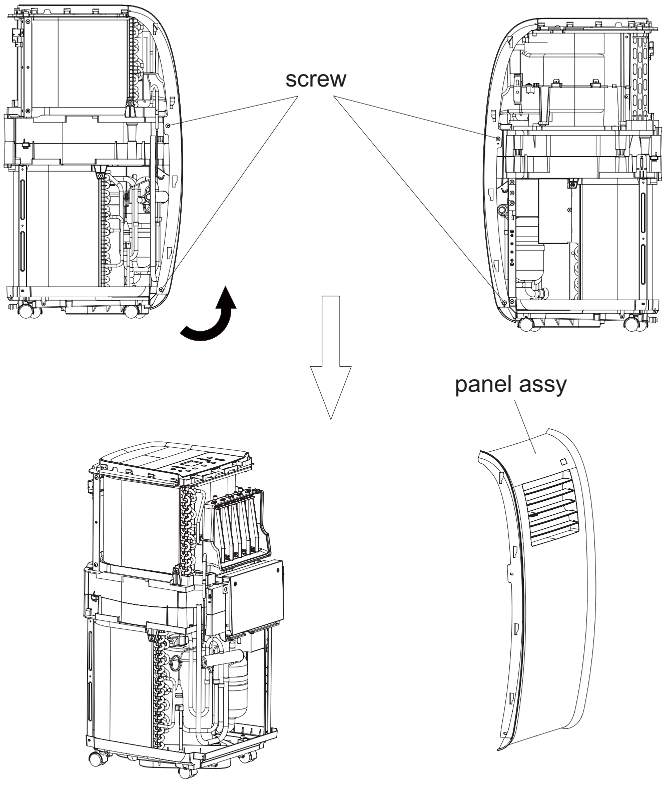
Note: The information above is for reference only.

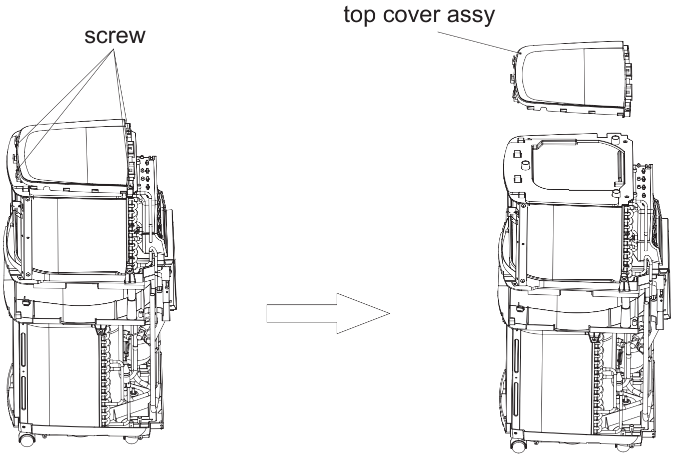
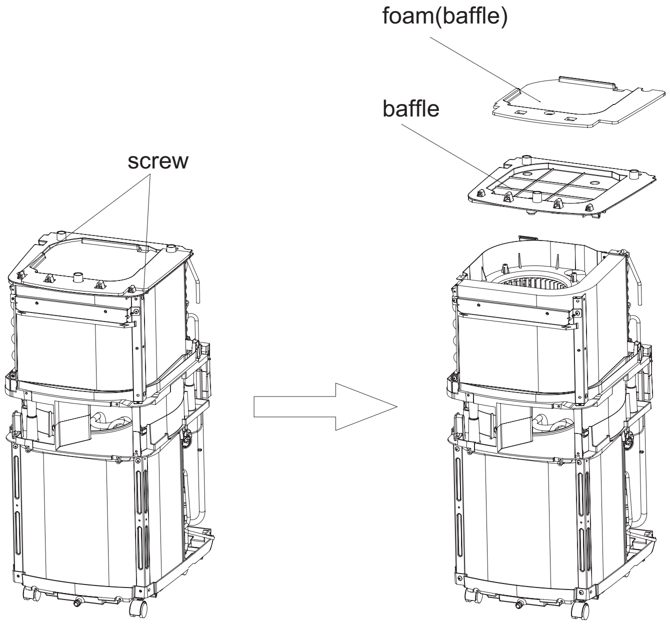
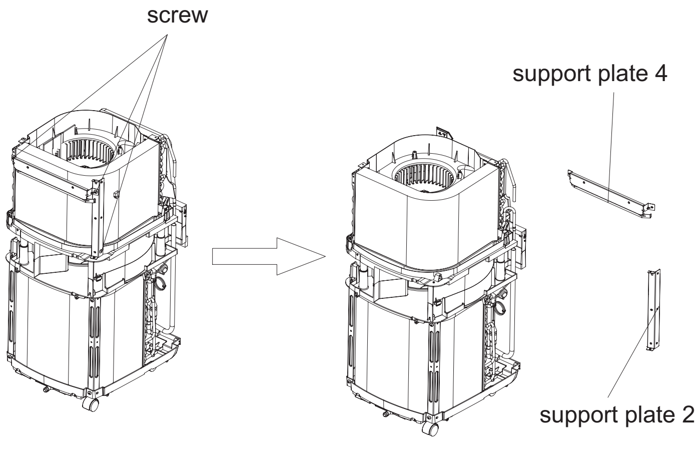
10. Removal Procedure

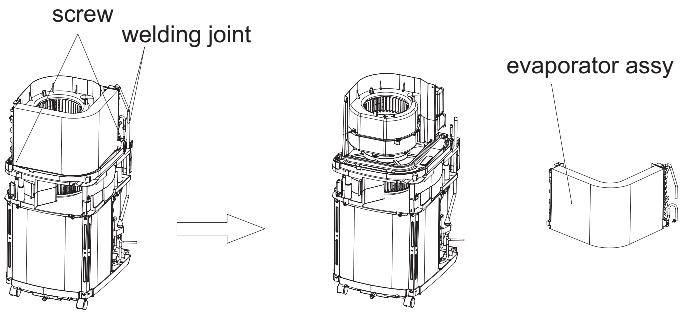
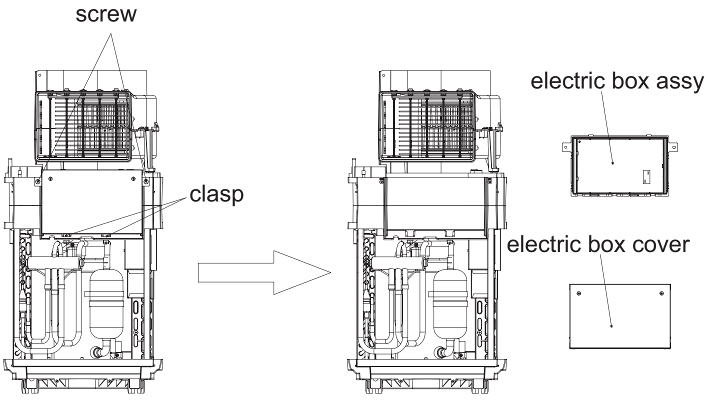
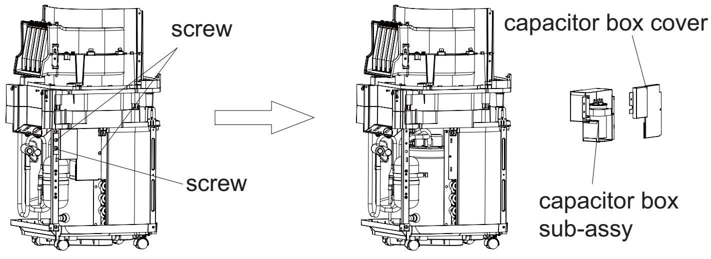
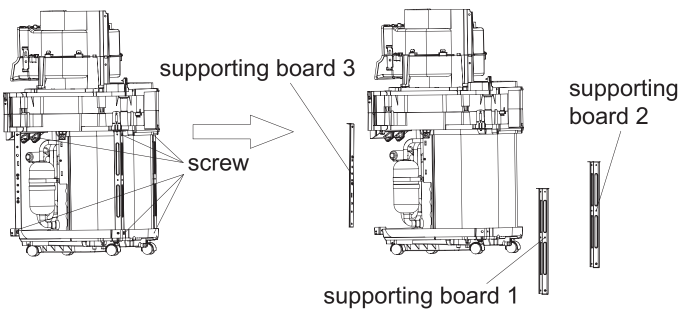
Warning Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

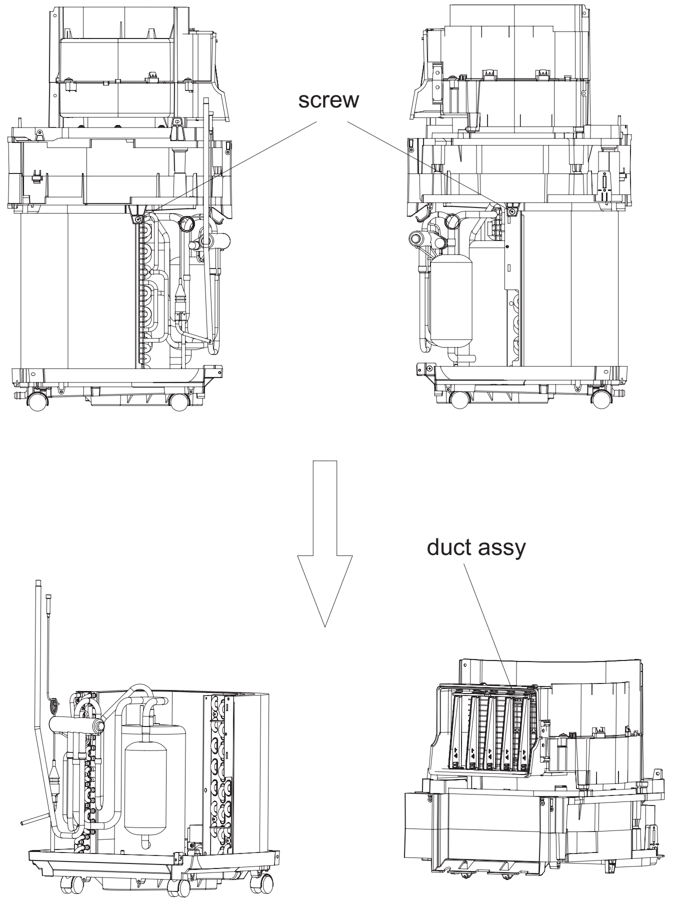
NOTE: Take heat pump for example.

<table>
<tr><td>Steps</td><td colspan="2">Procedure</td></tr>
<tr><td colspan="2">1.Remove filter 1</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Pull the clasp outwards, open filter 1 and then pull it outwards to remove it.</td></tr>
<tr><td colspan="2">2.Remove filter 2</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Hold the clasp of filter 2 and then pull it outwards to remove it.</td></tr>
<tr><td colspan="2">3.Remove rear plate</td><td rowspan="2"> </td></tr>
<tr><td></td><td>Remove the 8 fixing screws, push the rear plate upwards and then remove it after the clasp is separated.</td></tr>
</table>

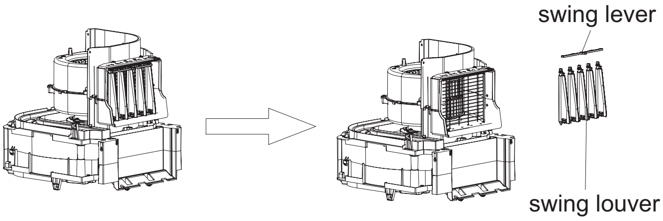
Steps	Procedure	
4. Remove left side plate and right side plate		 screw screw left side plate right side plate
	Remove the 10 fixing screws (5 at the left side and 5 at the right side); push the side plate upwards and then remove it after the clasp is separated.	
5. Remove panel assy		 screw panel assy
	Remove the 4 fixing screws, rotate the panel upwards slightly and then remove it.	

Steps	Procedure	
6. Remove top cover assy	Remove the 4 fixing screws and then remove the top cover assy.	 top cover assy screw
7. Remove baffle	Remove the foam, remove the 5 fixing screws (3 screws are under the foam) and then remove the baffle.	 foam(baffle) baffle screw
8. Remove support plate 2 and support plate 4	Remove the 3 fixing screws and then remove supporting plate 2 and 4.	 screw support plate 4 support plate 2

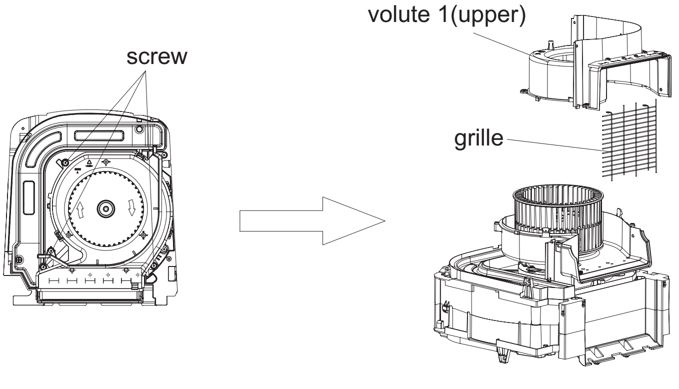
Steps		Procedure
9. Remove evaporator assy		 screw welding joint evaporator assy
	Unsolder the welding joint connected with the pipeline, remove the 2 fixing screws and then remove the evaporator assy.	
10. Remove electric box assy		 screw clasp electric box assy electric box cover
	Pull the clasp of electric box cover outwards; remove the electric box cover; remove the connection wire on the PCB board; remove the 2 fixing screws and then remove the electric box assy.	
11. Remove capacitor box sub-assy		 screw screw capacitor box cover capacitor box sub-assy
	Remove the 2 screws fixing the cover of capacitor box, remove the connection wire on the capacitor and then remove the cover of capacitor box; remove the 1 screw fixing the capacitor box and then remove the capacitor box sub-assy.	
12. Remove supporting board 1, 2 and 3		 supporting board 3 screw supporting board 2 supporting board 1
	Remove the 6 fixing screws to remove the supporting board 1, 2 and 3.	

<table>
<tr><td>Steps</td><td colspan="2">Procedure</td></tr>
<tr><td colspan="2">13. Remove duct assy</td><td rowspan="2">

screw
duct assy

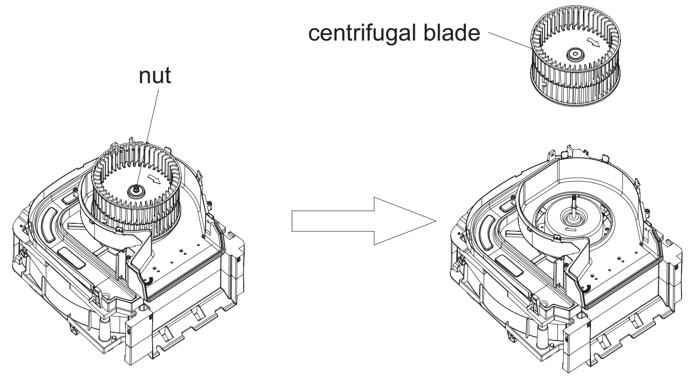
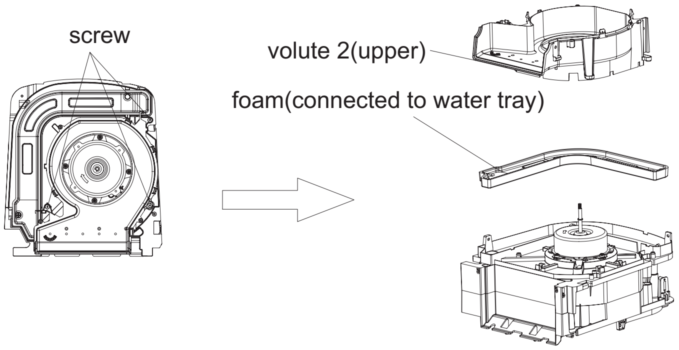
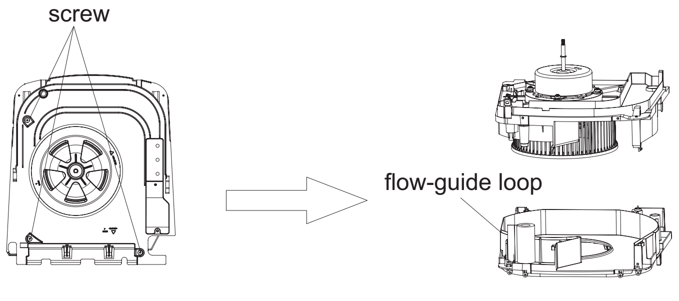
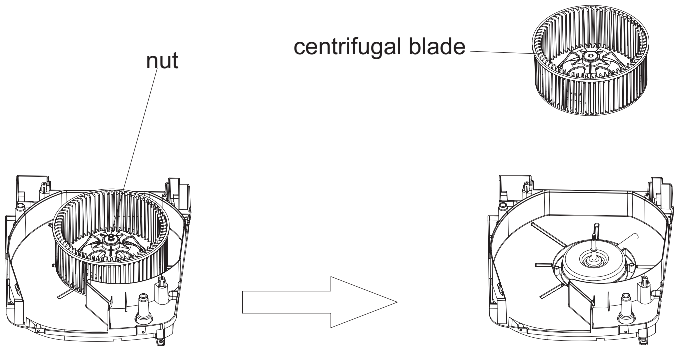
</td></tr>
<tr><td></td><td>Remove the 2 fixing screws and then remove the duct assy.</td></tr>
<tr><td colspan="2">14. Remove swing louver and swing lever</td><td rowspan="2">

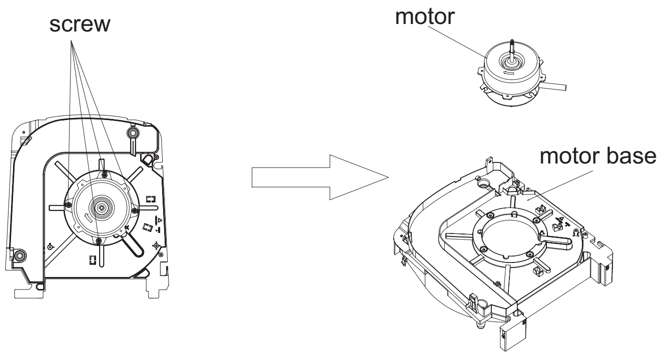
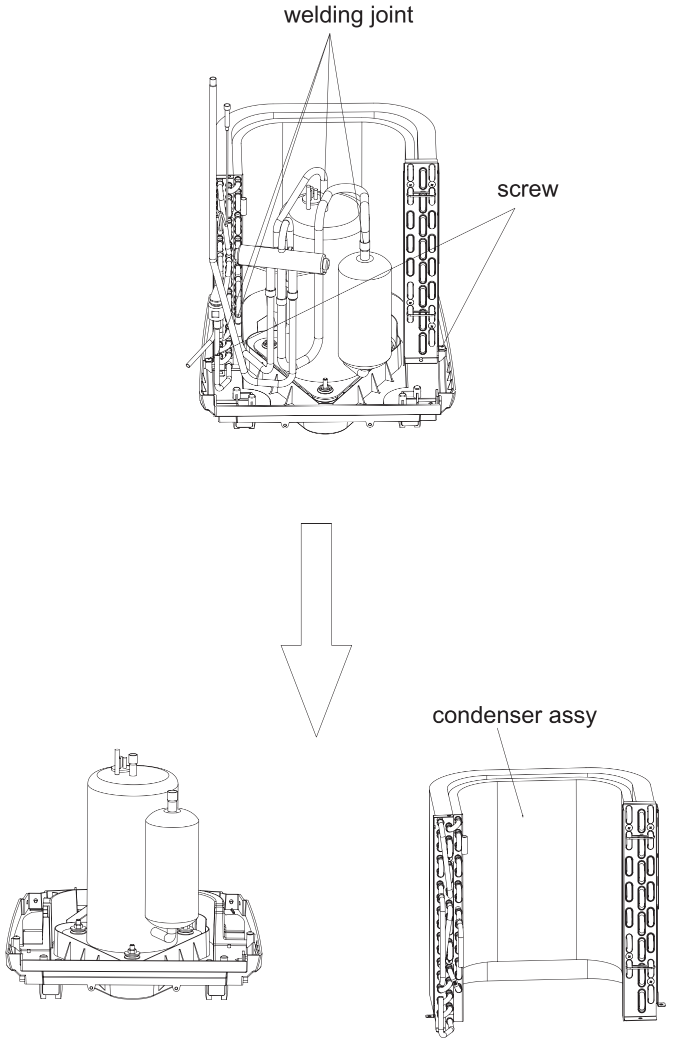
swing lever
swing louver

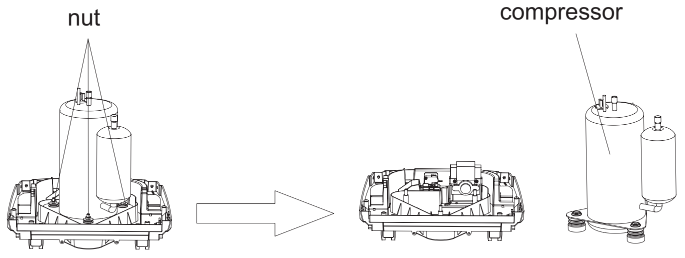
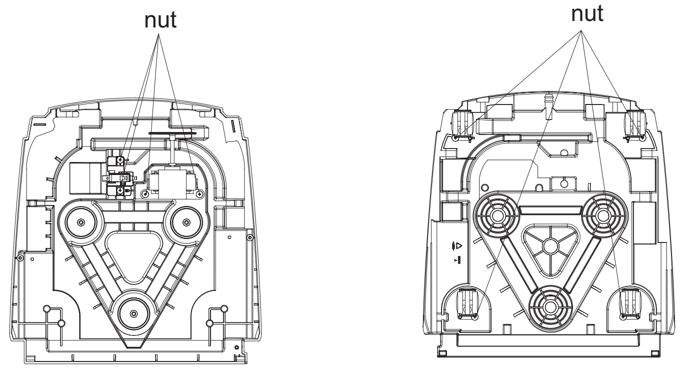
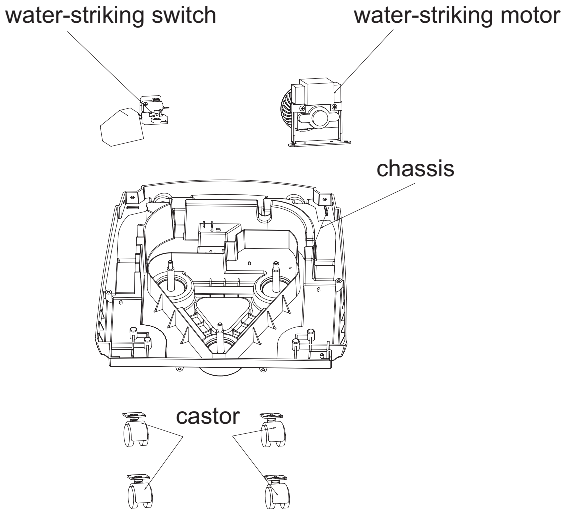
</td></tr>
<tr><td></td><td>Lift the swing louver upwards; bend the swing louver to separate it from the fixing hole; remove the swing louver; pull the swing lever outwards to remove the swing lever.</td></tr>
<tr><td colspan="2">15. Remove volute 1（upper）and grille</td><td rowspan="2">

volute 1(upper)
screw
grille

</td></tr>
<tr><td></td><td>Remove the 3 fixing screws to take out the volute 1(upper); remove the 2 screws fixing the grille to remove the grille.</td></tr>
</table>

Steps	Procedure
16. Remove centrifugal blade Remove the fixing nut and washer to remove the centrifugal blade.	 centrifugal blade nut
17. Remove volute 2(upper) Remove the 3 fixing screws to remove the volute 2(upper) and then remove the foam(connected to water tray).	 screw volute 2(upper) foam(connected to water tray)
18. Remove flow-guide loop Turn the duct assy upside down and then remove the 3 fixing screws to remove the flow-guide loop.	 screw flow-guide loop
19. Remove centrifugal blade Remove the fixing nut and washer to remove the centrifugal blade.	 centrifugal blade nut

Steps	Procedure	
20. Remove motor		 screw motor motor base
	Remove the 4 fixing screws to remove the motor.	
21. Remove condenser assy		 welding joint screw condenser assy
	Unsolder the welding joint connected to the pipeline; remove the 2 fixing screws to remove the condenser assy and pipeline.	

Steps	Procedure	
22. Remove compressor	Remove the 3 nuts fixing the compressor and lift the compressor upwards to remove it.	 nut compressor
23. Remove water-striking motor	Remove the 4 screws fixing the water-striking motor and water level switch to remove the water-striking motor and water level switch; turn the chassis upside down and remove the fixing screws(two for each castors) to remove the cators.	  water-striking switch water-striking motor chassis castor

JF00301572

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070
Tel: (+86-756) 8522218 Fax: (+86-756) 8669426
E-mail: gree@gree.com.cn www.gree.com

For continuous improvement in the products, Gree reserves the right to modidy the product specification and appearance in this manual without notice and without incurring any obligations.